15¢ A COPY

The OIL WEEKLY

Exclusively Devoted To The Production and Transportation of Oil and Gas

Engineering News Statistics

April 4, 1930 **Volume 57. No. 3**

A tong for every purpose, each the leader in its class for speed, efficiency and safety

BYRON JACKSON CO.
Established 1872
General Offices:
2150 E. Slauson Ave., Los Angeles, Calif.
Tulsa Oklahoma City Houston Shreveport
New York City

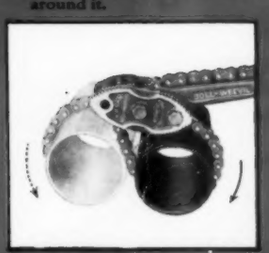
Each Byron Jackson tool, as produced today, embodies an ideal combination of all improved features previously distributed among several products of similar type. The net result is outstanding performance which insures lower operating costs

Use a BJ and get a Better Job

In "Making Up" there's NOTHING TO DO BUT PUSH DOWN

"BREAKING OUT"
Simply pull tongs back to engage forward teeth and lift up.

NO HOLDING UP
To apply, lay tongs on pipe and hook chain around it.



REVERSIBLE ACTION
Always ready for either "making up" or "breaking out".

with "Vulcan Boll-Weevil"

"Vulcan Boll-Weevil", Williams' NEW oil-fields Tongs, provides the simplest and easiest way to handle flat pipe work and pipe line work.

You simply lay the Tongs on top of the pipe and hook the chain around it. There's no holding up heavy tongs against the pipe from below till the chain can be wrapped around and hooked in. All that waste time, effort and energy is saved.

"Vulcan Boll-Weevils" provide for "making up" and "breaking out", alternately, without unhooking the chain. Fitted with Reversible Jaws for double life — when the teeth wear, simply turn the jaws over. Proof-tested and CERTIFIED Chain. Four sizes, for ¾ to 12″ pipe.

J. H. WILLIAMS & CO.
"The Wrench People"
New York BUFFALO Chicago

WILLIAMS
SUPERIOR DROP-FORGED TOOLS

VULCAN
BOLL-WEEVIL
CHAIN PIPE TONGS

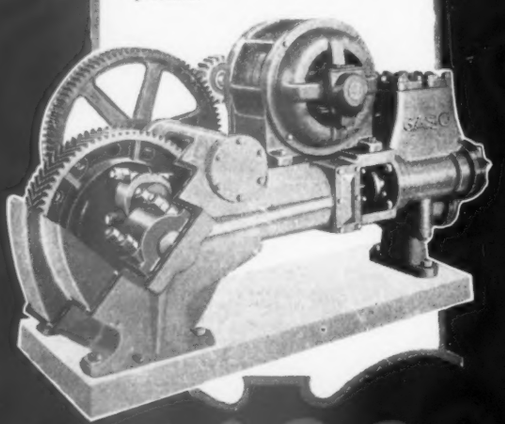
The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 3301 Buffalo Drive, Houston, Texas. Subscription price $1.00 per year; 15 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879.

One step ahead!

Whenever engineering advancement has made possible the creation of an improved pump for oil industry use, that pump has been built by Gaso. For Gaso has never hesitated in taking any step which could secure more efficient and more enduring pumps for any service within the oil industry.

GASO PUMP & BURNER MFG. CO.
Tulsa, Okla.
Fort Worth, Texas
New York, N. Y.

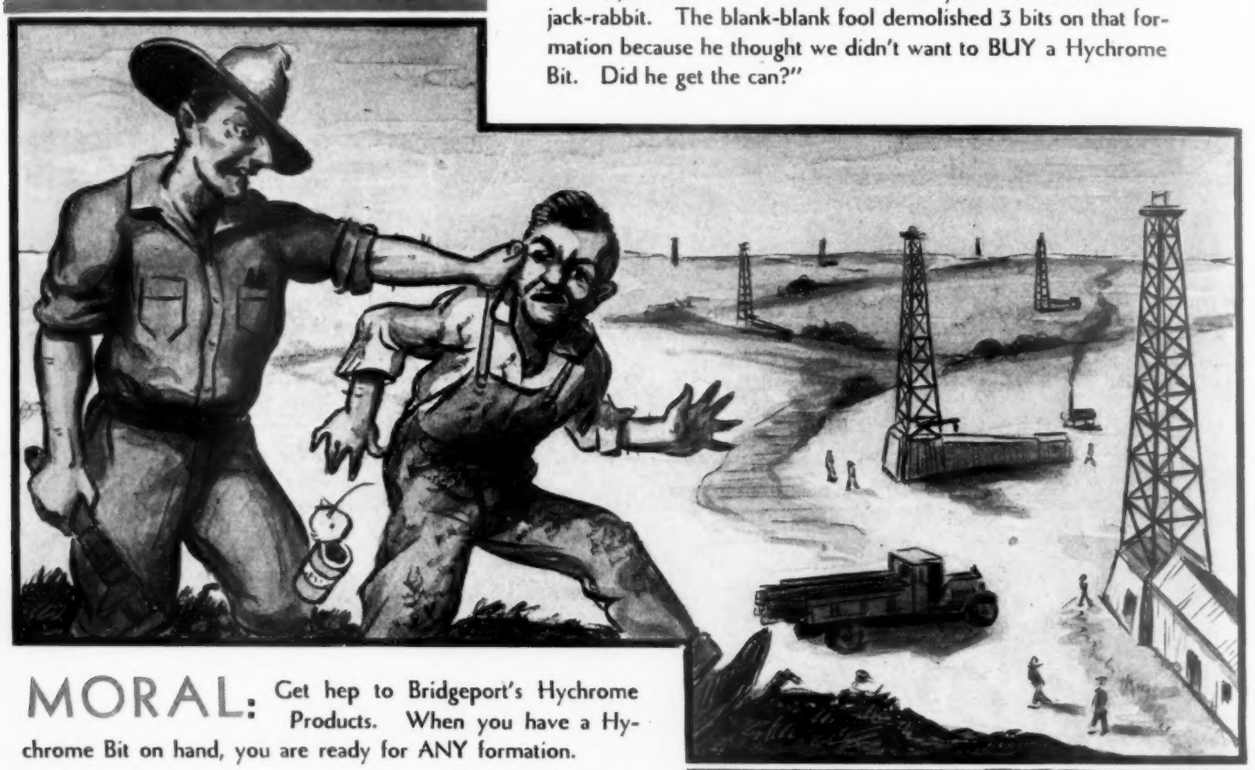
The Gaso Fig. 710 Timken Bearing, Enclosed Power Pump can be arranged for top-mounted motor drive, as shown, or for belt or V-rope drive from motor or gas or gasoline engine. Interchangeable liners give capacities ranging from 54 bbls. per hour at 1400 lbs. pressure to 500 bbls. per hour at 300 lbs. working pressure.



GASO PUMPS
for every oil industry need

*!/@ AND DON'T COME BACK/!!

"Now, you bozos listen to me while I tell you about that bloomin' jack-rabbit. The blank-blank fool demolished 3 bits on that formation because he thought we didn't want to BUY a Hychrome Bit. Did he get the can?"



MORAL: Get hep to Bridgeport's Hychrome Products. When you have a Hychrome Bit on hand, you are ready for ANY formation.

RENT IT FROM BRIDGEPORT

OF course you know that you don't have to buy a tool when you want one for only a short time. But do you know just how easy and economical it is to rent one from Bridgeport? Do you know that there is scarcely a drilling or fishing tool in use that can't be rented from Bridgeport? Do you know that the tools you get from Bridgeport are all factory dressed before they are sent to you?

Get hep to Bridgeport Rental Service. Jot these facts down in your mind now and remember them: Wire or phone us your needs COLLECT. We'll ship your tools without a moment's delay.

All branch stores--and our main office at Wichita--are open day and night, with complete stocks, backed by 24-hour service.

We are makers and distributors of the famous SWAN UNDERREAMERS and HYCHROME PRODUCTS. We are also distributors for Lucey Rotary Equipment--Hughes Tools--Guiberson products--Walworth Valves and Fittings,--Pittsburg Seamless and Wheeling tubular goods--Wright Engines, and a host of other top-notch products.

We are the largest concern of our kind in the world and our stocks are always complete.

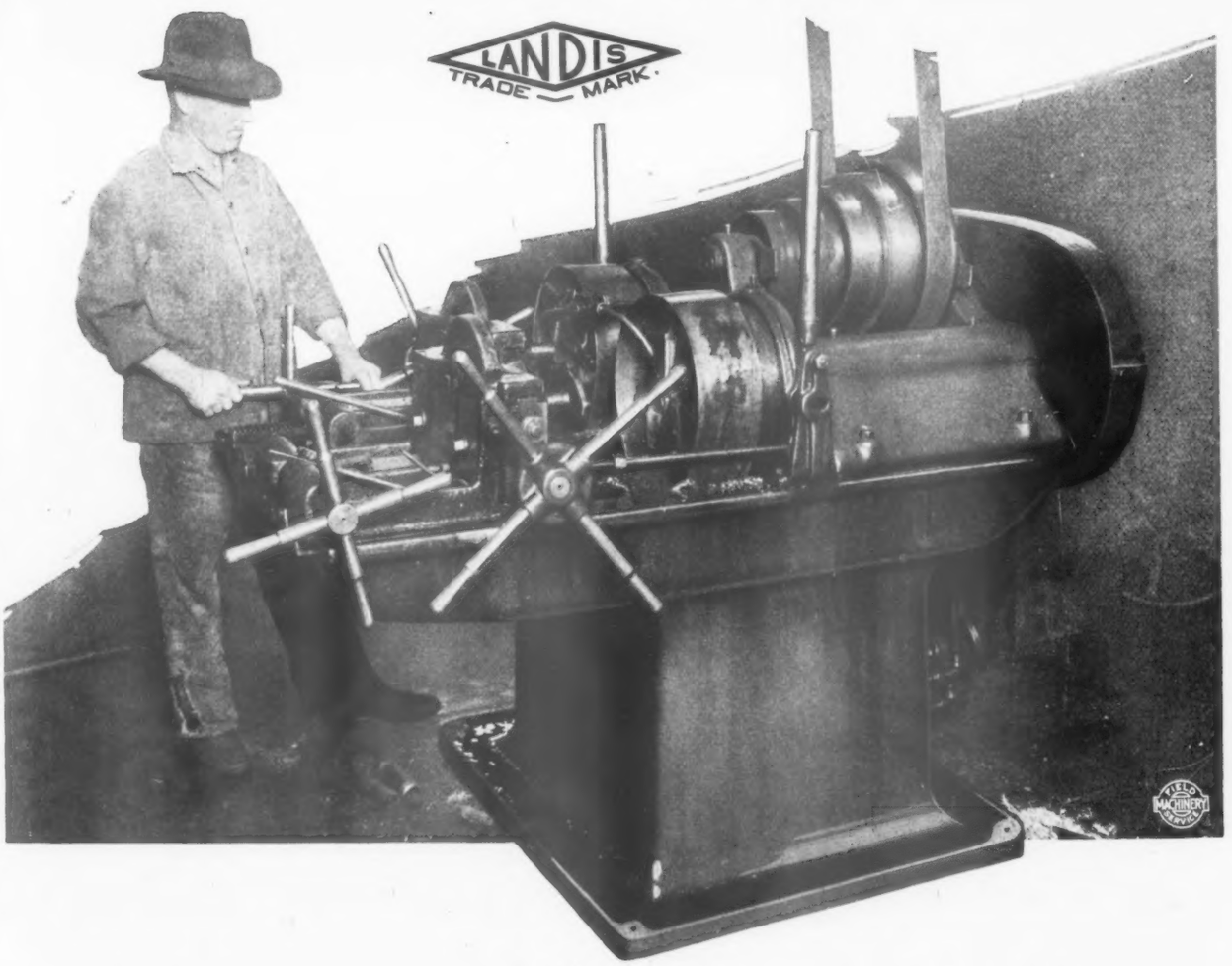
We pay freight charges up to 10 per cent of the Rental Fee when tools are shipped by public carrier and claim is supported by receipted carrier's bill. You pay for the time they are actually in your hands.

BRIDGEPORT NEVER DISAPPOINTS YOU. WE ARE PROUD OF THE REPUTATION WE HAVE ACQUIRED FOR REAL SERVICE.

The BRIDGEPORT MACHINE COMPANY

GENERAL OFFICES and FACTORY WICHITA, KANSAS

Branches Throughout the Oil Fields



For Few Threads or Many

Whether you cut few threads or many, the Landis Bolt Threading Machine, because of its flexibility, precision and low operating cost can be used to particular advantage in oil field work.

To be of any value in the oil fields, machines must have the ruggedness to stand up under severe working conditions. The machine illustrated has been in use for years and it is still an efficient producer of accurate, well-formed threads.

Oil field work requires a threading machine capable of handling a wide variety of materials—a machine covering a wide range, and above all, a machine able to maintain close thread limits.

The Landis meets oil field requirements fully. In addition, it has a tool cost low enough to effect a worth-while saving in operating cost.

The many advantages of a Landis Bolt Threading Machine warrants its installation in your shop whether you cut a few threads or many.

Further information will be sent on request. Ask for catalog No. 32.

LANDIS MACHINE COMPANY

WAYNESBORO, PENNA., U. S. A.

Detroit Offices: 5928 SECOND BLVD. *Cleveland Offices:* 504-505 MARSHALL BLDG.

Represented in the Domestic Oil Fields by: Colcord-Wright Machinery and Supply Co., St. Louis, Mo.; D. S. Mair Machinery Co., Houston, Tex.; Woodward Wight & Co., New Orleans, La.; Herberts Machinery & Supply Co., Los Angeles; Herberts Moore Machinery Co., San Francisco, Calif.; Hendrie & Bolthoff Mfg. & Supply Co., Denver, Colo.

A smooth resilient all-rubber cushion surface within the casing

"Slick as a greased pig"

FULLY PATENTED

On automobile tires they put *Knobs* on the tread to help keep the car from skidding. On Bettis Protectors we make the surface *smooth*, with a continuous circle, to facilitate "skidding" and to reduce friction to a minimum.

No Hinges
No Metal
No Pins
No Wire
No Knobs
No Gadgets

"Best bet yet"

Patterson-Bailagh Corporation

Insurance Exchange Building, Los Angeles

Texas and Gulf Coast Distributors:
BETTIS SALES CO., 616 Public National Bank Building, Houston

Oklahoma Distributors:
BAILEY AND BECKER COMPANY, 410 Thompson Building, Tulsa

New York Offices: 39 Cortlandt Street

Carried in stock at Los Angeles, Santa Fe Springs, Ventura, Kettleman Hills, Bakersfield, Coalinga, Long Beach, California, Tulsa, Oklahoma, Houston and Wink, Texas, Calgary, Alberta, Canada, New York City.

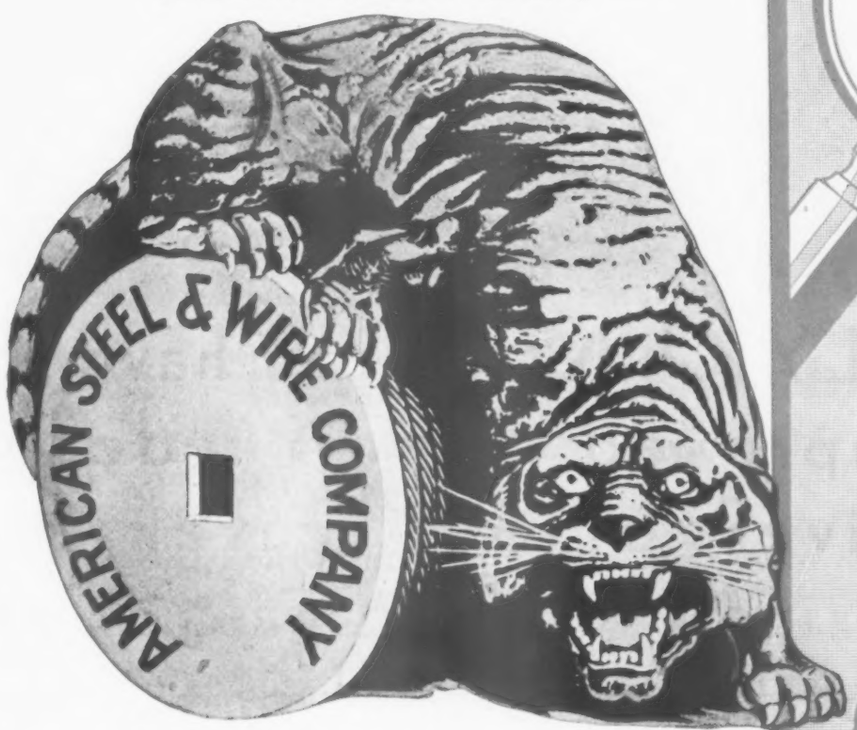
Bettis Protectors - *The genuine anti-friction Rubbers*

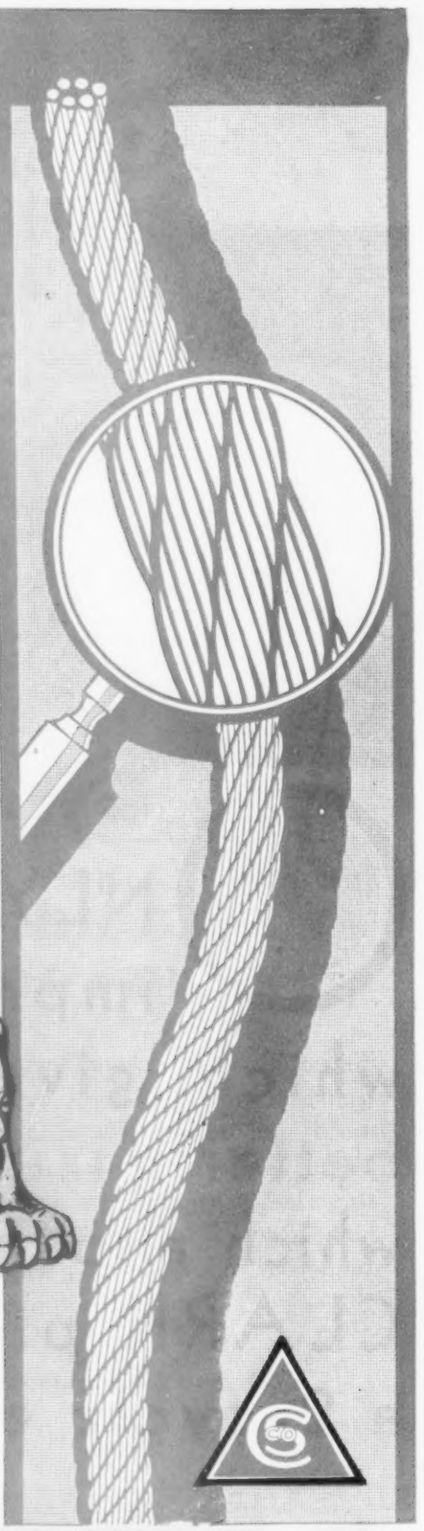
WIRE LINES LOOK PRETTY MUCH ALIKE

SO EXPERIENCED USERS PLAY SAFE BY USING

AMERICAN WIRE LINES

(ON THE YELLOW REELS)





"If Continental Sells It....There Is No Better"

THE CONTINENTAL SUPPLY COMPANY
General Offices: ST. LOUIS

THE CONTINENTAL SUPPLY CO., LTD.
224 Traders Building, Calgary, Alberta, Canada

Export Offices: CONTINENTAL EMSCO COMPANY, INC. 74 Trinity Place New York
London Offices: 316-17 Dashwood House, Old Broad St., E. C. 2

J528

CONTINENTAL

CLARK PIONEERING HAS DEVELOPED THE *PERFECTED* 2-CYCLE ENGINE

Compressors and Gas Engines

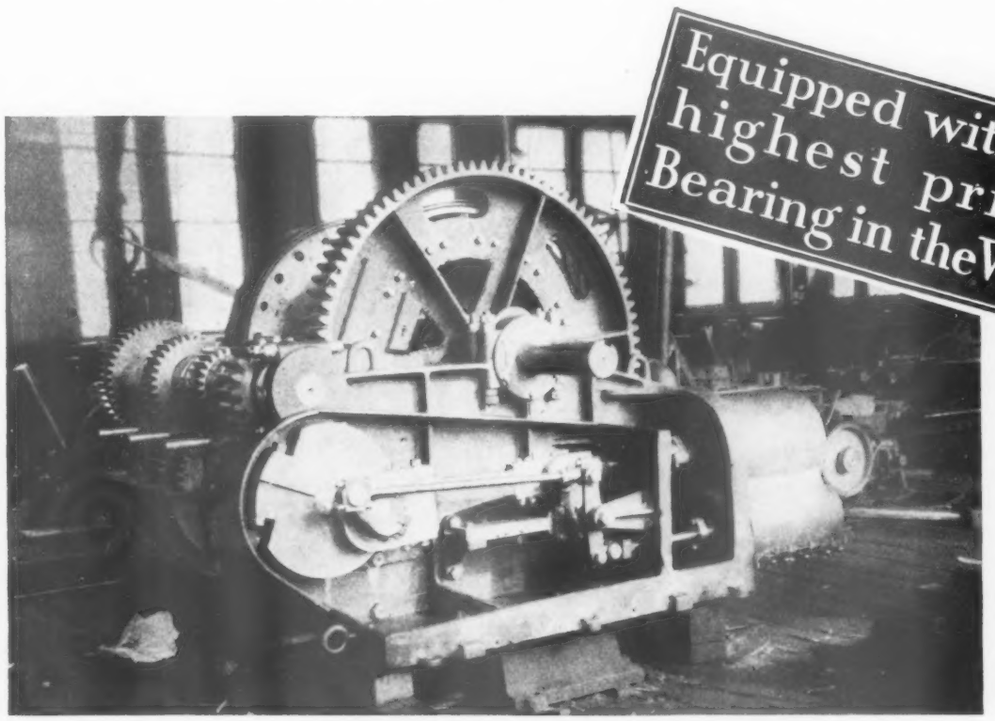
NLY CLARKS can have the improved Super 2 design which gives better scavenging, better mixing of air and gas . . . and which also saves one-third of the fuel. CLARK pioneering has made this a 2-cycle era.

CLARK BROS. COMPANY, Olean, N. Y. ◆ Export Office: 150 Broadway, New York City. ◆ Mid-Continent Sales Offices: Tulsa and Fort Worth. Warehouses: Tulsa; McCamey and Sweetwater, Texas; Artesia, N. M. California: Smith, Booth, Usher Company, 228 S. Central Ave., Los Angeles.

CLARK

ANOTHER MANUFACTURER IN THE OIL INDUSTRY THAT USES SKF BEARINGS

S. FLORY MANUFACTURING CO.



SKF BEARINGS STAND THE GAFF OF BRUTE JOBS IN THE OIL FIELDS

FOR the rugged jobs of the oil fields, where reliability and low cost operation must go hand in hand, SKF Self-Aligning Roller Bearings are particularly applicable. That's the reason why the S. Flory Manufacturing Co. put four of these bearings on their 300 H. P. steam hoist.

Not only do SKF Self-Aligning Roller Bearings run smoothly and materially reduce friction losses but they also have the necessary ruggedness and long life to stand the hard knocks of constant service. Neither do they ever require adjustments. This is a highly important factor in maintaining proper gear mesh and prolonging the life of component parts.

SKF INDUSTRIES, INC., 40 East 34th Street, New York, N. Y. 2493

EQUIPPED WITH THE HIGHEST PRICED BEARING IN THE WORLD

Means just this

SKF

Ball and Roller Bearings

That the manufacturers whose product is illustrated above preferred to pay more for their bearings and less for servicing or replacing them. They preferred to pay a higher price in the beginning than many times this higher price in the end. And, finally, they preferred to economize by using SKF bearings because they are made to do their job, not to fit a price list.

QUALITY that assures Lasting Service

Bethlehem Steel Pipe is made to give lasting service, even when conditions are unusually severe. Each step in its manufacture is carried out with this objective. Strength, uniformity, ductility, sound welds, clean, smooth surfaces, and freedom from flaws—these are qualities assured by careful manufacture and by rigid tests and inspections.

Bethlehem Steel Pipe is made in a splendid, modern mill. Unexcelled facilities, the special processes employed, the high quality of the raw materials, the skill and experience of the men in charge of the various operations—these factors insure that Bethlehem Steel Pipe conforms in every respect to the Bethlehem standard of quality.

The nearest Bethlehem District Office will gladly give you further information about Bethlehem Steel Pipe. Your inquiry or order will receive immediate attention.

BETHLEHEM STEEL PIPE

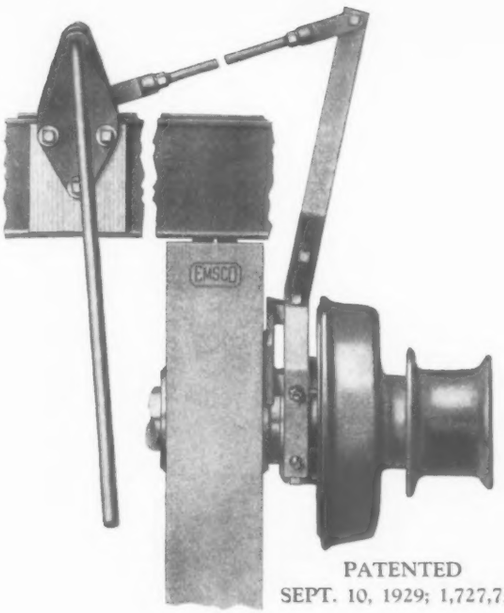
Bethlehem maintains at Wilmington, Calif., and at Houston, Texas, well-assorted stocks of line pipe, ready for immediate shipment. Both threaded and coupled and plain-end pipe are included in these stocks.

BETHLEHEM STEEL COMPANY, General Offices: Bethlehem, Pa.

District Offices: New York, Boston, Philadelphia, Baltimore, Washington, Atlanta, Pittsburgh, Buffalo, Cleveland, Cincinnati, Detroit, Chicago, St. Louis

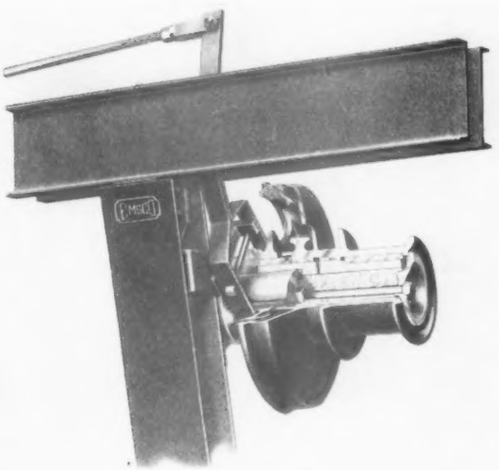
Pacific Coast Distributor:
Pacific Coast Steel Corporation, San Francisco, Los Angeles, Portland, Seattle, Honolulu

Export Distributor: Bethlehem Steel Export Corporation, 25 Broadway, New York City



PATENTED
SEPT. 10, 1929; 1,727,750

Two heads *are better than one . .*



A FRICTION CLUTCH SAFETY CATHEAD which breaks the toughest joints . . . plus a fixed cathead for use with catline; two distinct catheads in one unit . . . faster, safer and more convenient.

The cone clutch is exceptionally large and will break any joint without undue exertion on the operating lever. The cone type of clutch may be released at any time - a marked improvement over the average automatic cathead with its fixed distance of tong-rope travel.

The entire unit is mounted on a quill, permitting easy installation. The operating lever is placed convenient to the driller. The cathead is provided with a large oil chamber, packed with waste. Centrifugal force carries the oil through the oil hole in the quill to the bronze bushings. This cathead can be supplied to fit all types and makes of draw works.

Write for Advance Engineering Folder No. 92

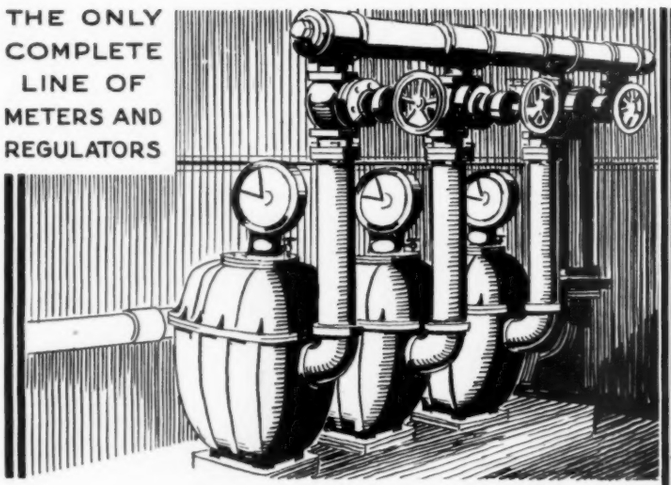
EMSCO
TYPE A DUAL
CATHEAD

TRADE MARK
EMSCO D+B
Protected by Steel
EQUIPMENT CO.
LOS ANGELES, CALIFORNIA
HOUSTON, TEXAS; DALLAS, TEXAS
EXPORT OFFICE: 74 TRINITY PLACE, NEW YORK CITY, N.Y.
U.S.A.
THE EMSCO ENGINEERING CO. LTD. LONDON, ENG.

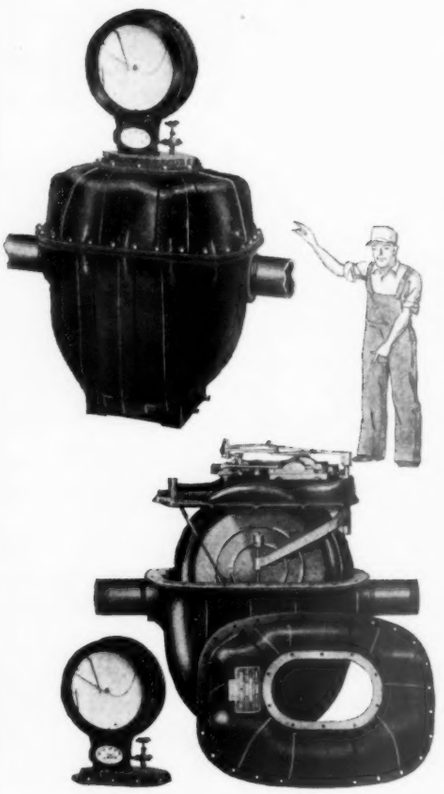
All Emsco and D+B Products (Except Derricks) Sold Exclusively in Mid-Continent Fields by The Continental Supply Company

EMSCO STEEL EQUIPPED WELLS ARE SAFE

THE ONLY COMPLETE LINE OF METERS AND REGULATORS



FOR MEASUREMENT IN THE FIELD -EMCOS



EMCO large capacity meters with combined record gauges are particularly suited for measurement in the field.

All moving parts are mounted on one removable casting, the valve plate, making it easier to make repairs in the line. Rolling type diaphragm, patented tangent and valve movement, interchangeability of all parts, diaphragm drains, one piece case construction; all these are features that result in accurate measurement.

EMCO PRINCIPLES

One Piece Case Design · Rugged Beyond Compare
All Moving Parts on Removable Casting
All Parts Interchangeable
Rolling Type Diaphragm

EMCO METERS AND REGULATORS

PITTSBURGH EQUITABLE METER COMPANY

Main Office and Works—Pittsburgh, Pa.

New York City · Chicago, Ill. · Los Angeles, Calif. · Tulsa, Okla. · Dallas, Texas · Columbia, S. C. · Salt Lake City · Kansas City, Mo. · Seattle, Wash. · Houston, Texas

Regan Control Head

Anticipating the need of a Control Head to which companion flanges, valves and other equipment having flange connections can be readily attached, and which not having any casing suspended from them, must necessarily have sufficiently large flanges and bolts to withstand the pressures, Regan engineers have designed equipment to fill these conditions. This new design of Control Head is being made in all sizes, and in capacities up to 6000 lbs. test.

The complete line of Regan control equipment is divided into three classifications as follows:

Type A—for normal pressures.

Type B—for medium pressures, tested to 3,000 lbs.

Type C—for high pressures, tested to 6,000 lbs.

In the higher pressure classifications, the flanges, spools, couplings, tubing heads, etc., are much heavier in weight. Each type is designed in accordance with good engineering standards.

In these three classifications, A, B and C, Regan control equipment meets every condition.

Detail View of Casing Head

Illustration shows a detail construction view of the Regan Santa Fe casing head. It represents a 6-string hook-up for sizes 18⅝", 16" 13⅜", 10¾", 8⅝", 6⅝".

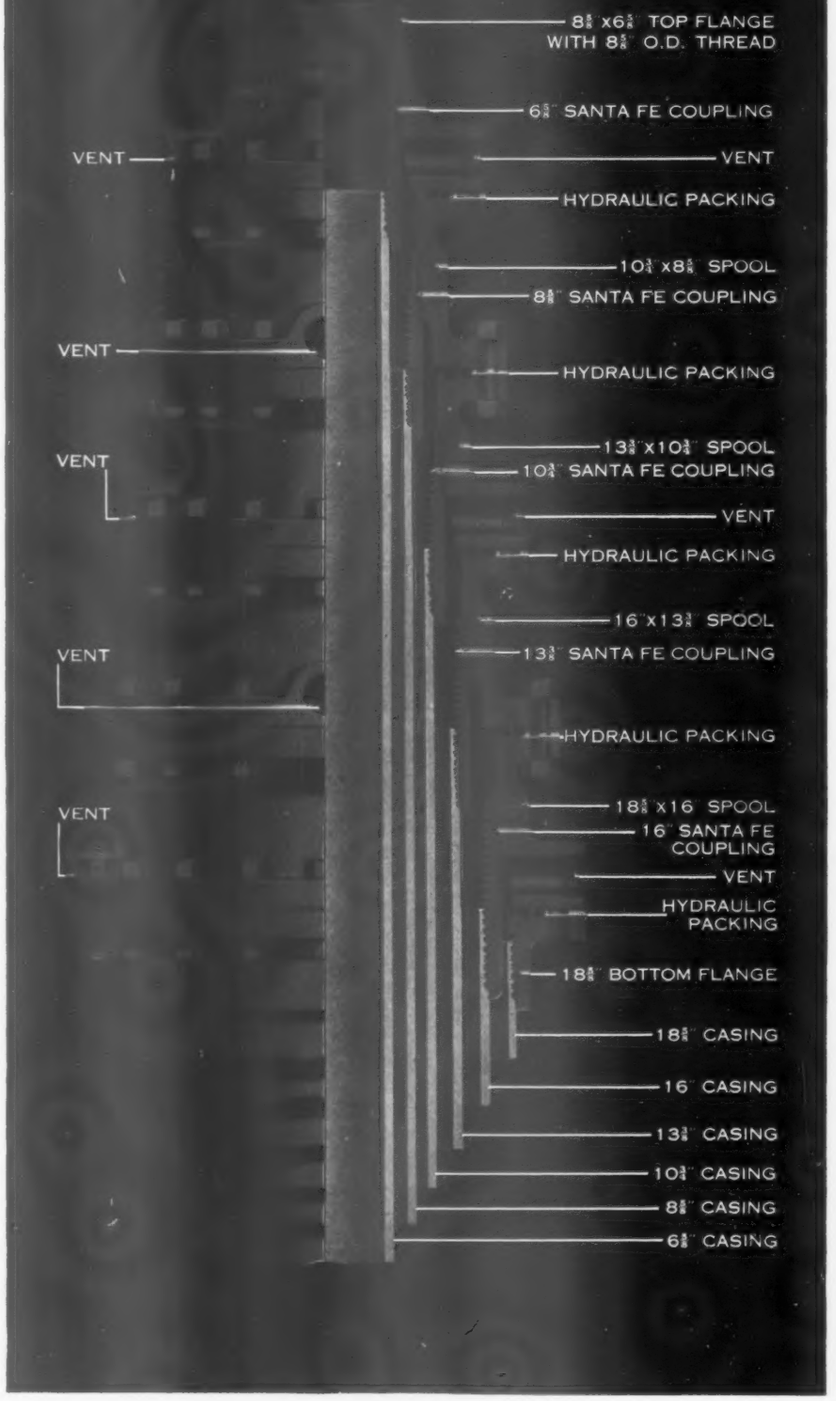
Other combinations of sizes, also different test pressures (Types A, B and C) are available for all styles of hook-ups.

Regan
Forge & Engineering Co.
Oil Field Equipment
Plant and General Offices:
SAN PEDRO (Los Angeles Harbor) CALIFORNIA, U. S. A.

New York Office
75 West Street,
Wm. Braat, Manager
Mid-Continent Office
Dallas, Texas
501-2 Marvin Building

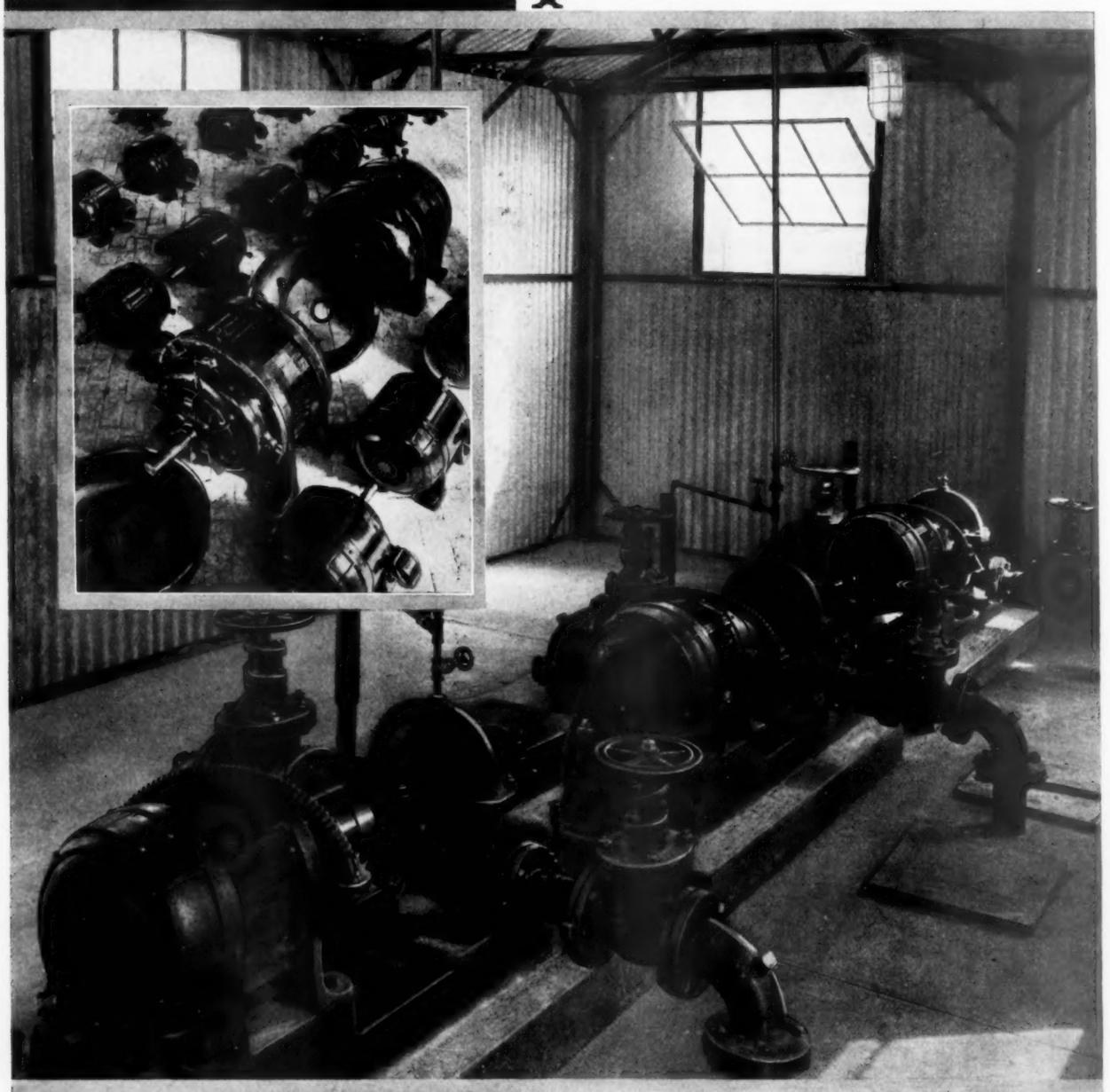
Representatives
Oklahoma City, Okla.,
2420 W 21st Street.
Pecos, Texas,
P. O. Box 444
Maracaibo, Venezuela,
Wm. Adams, care Amer. Consul

...for controlling normal, medium and high pressures.



Safe Motors

Wagner Air-jacketed Motors are safe because they are totally enclosed . . . they are economical because they are well ventilated by a blower mounted externally on one or both ends of the shaft, depending on the motor rating. These motors are proof against corrosive fumes, moisture or dust. In the oil industry they are used indoors and out-of-doors because they are always ready for service.



Wagner, Quality

Check your requirements with Wagner, because Wagner builds every commercial type of alternating current motor.

Literature on Request

WAGNER ELECTRIC CORPORATION

6400 Plymouth Ave., St. Louis

Oil field specialists at Tulsa, Dallas, Houston, Los Angeles, San Francisco

PRODUCTS . . . FANS . . . DESK . . . WALL . . . CEILING
TRANSFORMERS . . . POWER . . . DISTRIBUTION . . . INSTRUMENT
MOTORS . . . SINGLE-PHASE . . . POLYPHASE . . . DIRECT CURRENT

61-7832-4

"Everything's fine, Frank"

"THEY came over first thing this morning . . . Parkersburg carries tanks in stock here, you know . . . Sure, their erection crew will have that battery on the Johnson up before night . . . Sure, we'll have them tested with water . . . Okey . . . Yeah, I'll look for you."

And when Frank gets there he'll see first hand how Parkersburg Bolted Steel Tanks have been engineered to combine the strength and service of a permanent installation with knock-down convenience, to meet any future changes in operations.

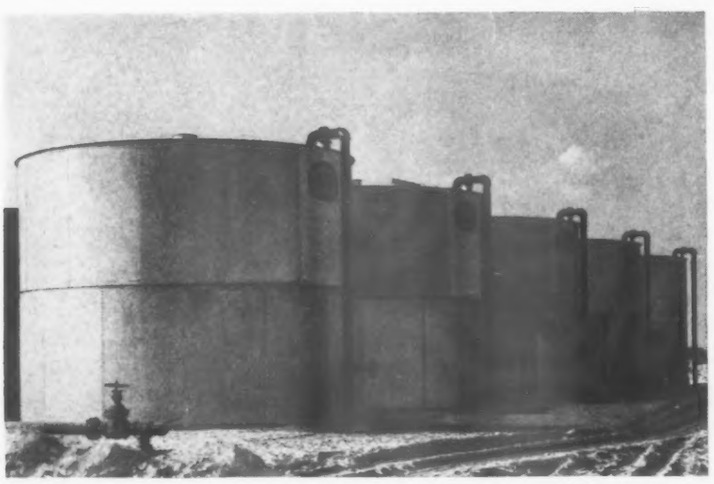
Uniformity and accuracy throughout—in the forming and cutting of sheets and the punching of holes—make assembly fast and easy. And, when these plates of steel, coated heavily with aluminum, are put together, these tanks will remain a "sweet looking" job as long as they are in service. They will retard corrosion, and prevent evaporation.

Vapor-tight Tanks—pioneered and perfected by Parkersburg—should be *your* standard, too. Ask a near-by representative for further facts.

PARKERSBURG PRODUCTS

Bolted Steel and Aluminum Tanks
Steel Derricks and Crown Blocks
Chain-Driven Sand Reels and Bailing Reels
Steel (Bull, Band and Calf) Wheels
All-Steel Standard Rigs
Rig Irons
Portable Drilling Machines (Wood and Combination-Steel)
Miscellaneous Drilling Equipment
Steel Walking Beams and Pitmans

We Subscribe to A.P.I. Standards



THE PARKERSBURG RIG AND REEL CO.

TRADE MARK REG

THE PARKERSBURG RIG AND REEL COMPANY

Main Offices and Works

PARKERSBURG, WEST VIRGINIA

NEW YORK - TULSA - FT. WORTH - HOUSTON

Branches In All Active Fields

118-A

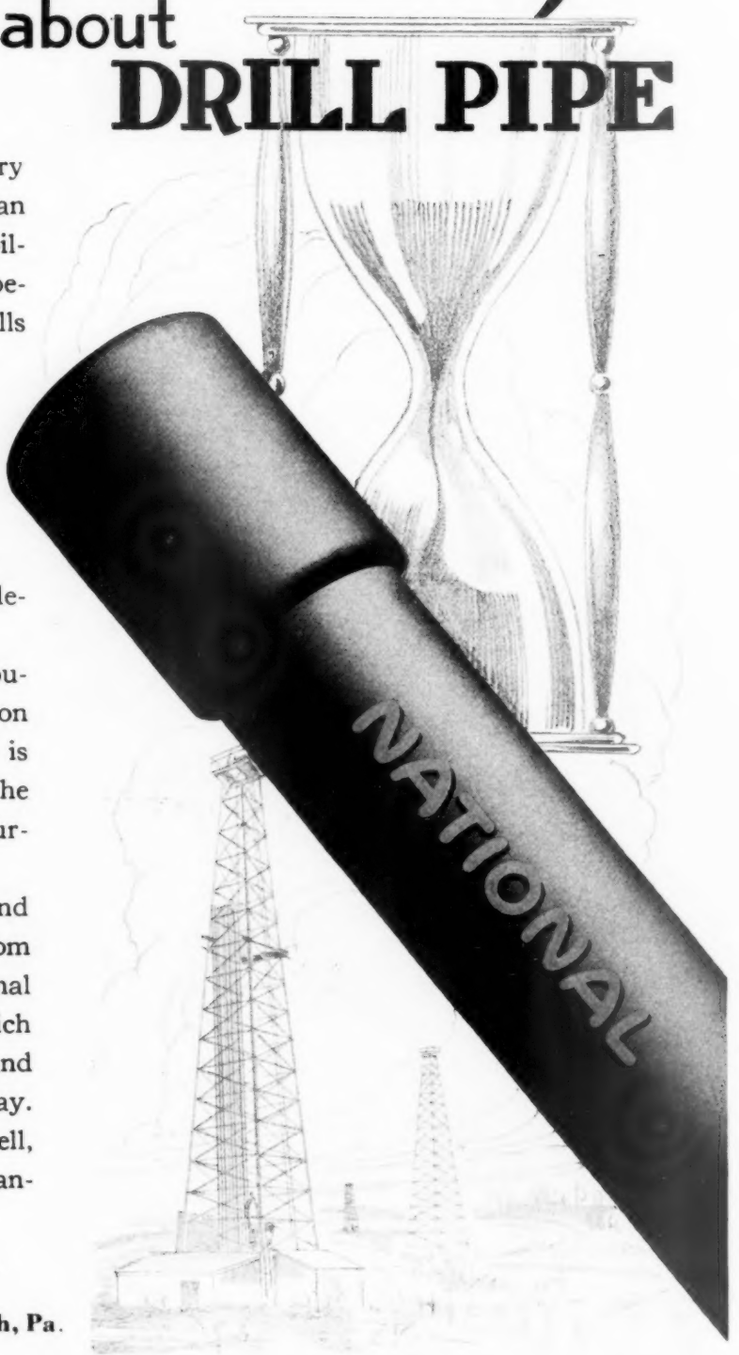
TIME *has told its story* about DRILL PIPE

WITH the drilling of the first rotary well, National began building an enviable record for drill pipe dependability. As service requirements have become more and more severe—as wells have gone deeper—as higher speeds and greater weights of strings have developed—National Pipe has continued to set the standard for unfaltering performance—the pacemaker in pipe dependability which has made possible the marvelous developments in the oil fields.

Among the outstanding contributions of the "National" organization to oil production in recent years is National A. P. I. Drill Pipe—now the recognized standard for drilling purposes.

Strength, uniformity, ductility, and strong threads (especially protected from mill to derrick) are some of the National A. P. I. Drill Pipe advantages which appeal to modern oil well operators, and account for its extensive use today. Time has told its story, and told it well, of National Pipe dependability—another reason why National is—

America's Standard Wrought Pipe

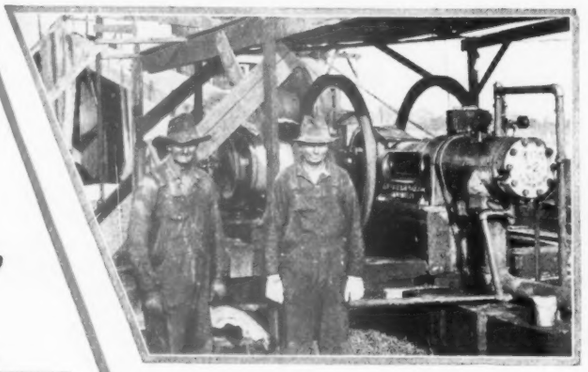


NATIONAL TUBE COMPANY · Pittsburgh, Pa.
Subsidiary of United States Steel Corporation

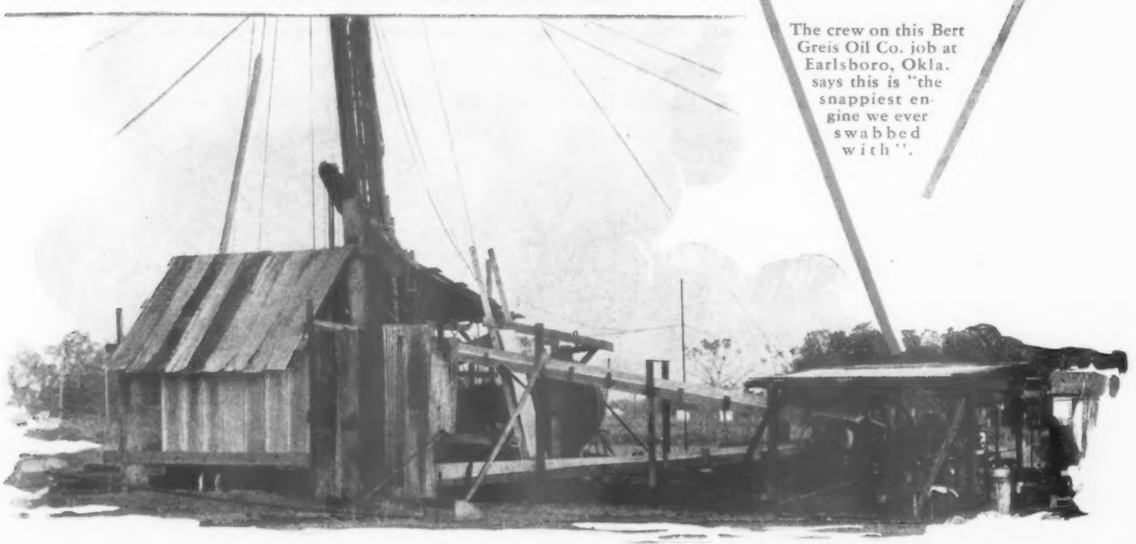
NATIONAL PIPE

TICO'S OK

says the driller



The crew on this Bert Greis Oil Co. job at Earlsboro, Okla. says this is "the snappiest engine we ever swabbed with".



...and so say all the drillers

THERE'S no mystery to why the men out on the job prefer TICO 2-cycle GAS ENGINES. They need less attention, last longer and run smoothly (which interests the drilling crew)—and save money that shows on the cost records. It will pay you to start with new TICO ENGINES on your 1930 development program. *Catalogs on request.*

THE TITUSVILLE IRON WORKS COMPANY
Division of Struthers Wells-Titusville Corporation
TITUSVILLE, PA.

Mid-Continent Office
503 Exchange National Bank Bldg.
Tulsa, Okla.

For Kansas, Oklahoma and Northwestern Texas
International Supply Company
Tulsa, Okla.

For California
California Machinery and Supply Company
2449-55 Hunter St., Los Angeles, Calif.

For Texas, Louisiana, Arkansas and New Mexico
Mid-Continent Supply Company
Forth Worth, Texas

For Export; American Steel Export Company, Inc.
535 Fifth Avenue, New York, N.Y.

TITUSVILLE OIL COUNTRY MACHINERY
BUILT WITH RESERVE RUGGEDNESS

TIW—55

TITUSVILLE

OIL FIELD EQUIPMENT

GAS ENGINES—PUMPS—BOILERS—DRILLING RIGS—STEAM ENGINES

The Hole Truth:

the Franklin Valveless Oil Drilling Engine

Makes Hole Cheaper and Faster

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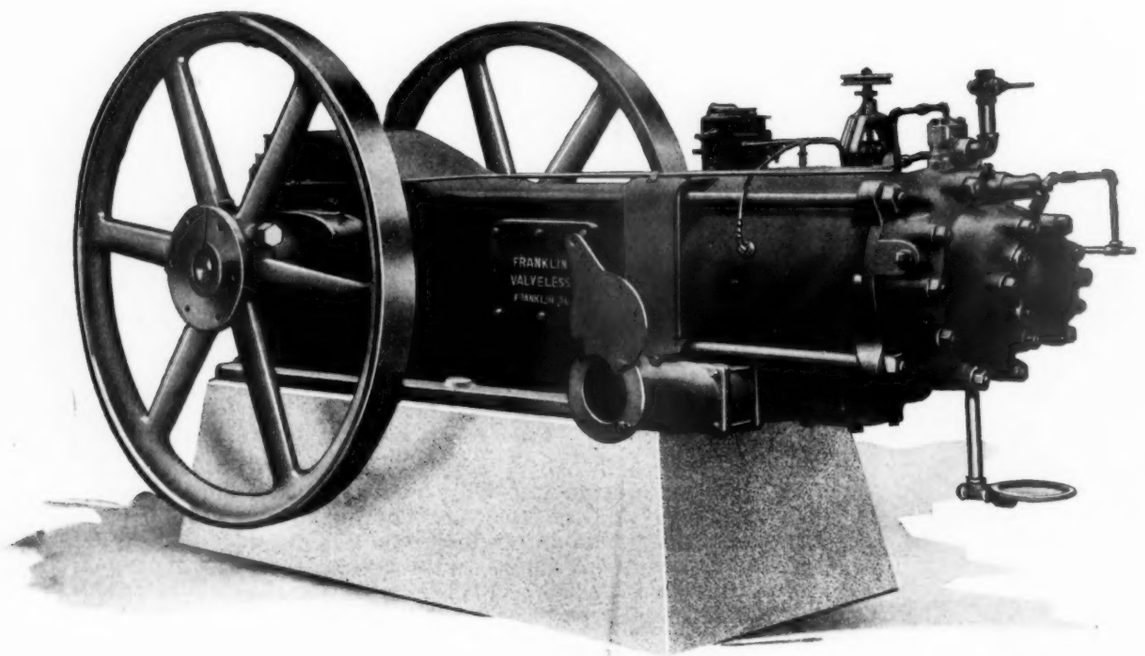

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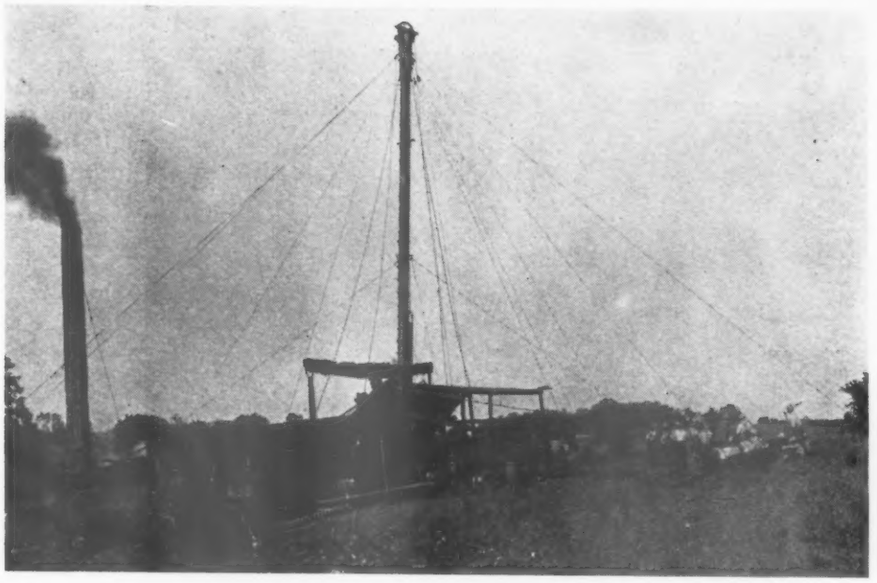


Most common type of drilling equipment used in Western Kentucky

Western Kentucky Development Slowed by Shut-Down Agreement

By W. H. McGREW
Staff Representative

WHILE the Western Kentucky oil producing area saw little drilling activity during the last month of 1929 and the first quarter of 1930, wonderful development has occurred in this area during the last eight years—the period from the first development down to the period of enforced inactivity which extended from December 15, 1929, to March 15, 1930.

Of this area, the tri-county district comprising Daviess, Ohio and Hancock Counties, has increased its production from less than 3900 barrels for the year 1922 to 3,866,897 barrels for 1929. Of this total Ohio County produced about 2,867,000 barrels; Daviess County 1,065,000 barrels; and Hancock County 15,000 barrels.

While development of the Western Kentucky field has been rapid during the past two years, an even more rapid development up to that time had been difficult and next to impossible because of the topography of the country and its relatively undeveloped condition. The state is rough and hilly with but little railroad transportation, and the road system comprised, for the most part, undeveloped, unimproved, dirt roads, except in the Blue Grass region.

Thus it had been necessary in the early development of oil properties in Western Kentucky, for the operators to build their own roads, or attempt development where roads had already been built, greatly retarding rapid development and areas where geophysical surveys indicate oil may be found, have until recently been undeveloped.

For 25 years Kentucky has proven itself to be a profitable oil and gas producing territory, and has established a record as the greatest shallow oil field in the world, a record it has maintained down to the present.

The first modern development of oil in Kentucky occurred in Irvine in Estill County, in 1914. Since that time there has been no cessation of activity except for the period during which the Bowling Green field was developed so disasterously with the result that a temporary lull followed.

Early Development

With little money and only a water well outfit and a string of tools, Charles Dulin, James and Fred Hillis came into the Cow creek section of Estill County and brought in what later was known as the Irvine pool with production at Furnace Fork. The wells were small and some time later the field was abandoned. Renewed wartime demands for crude oil and an increase in prices of all grades generally resulted in the restimulation of exploration, with the result that the Irvine pool was extended in 1916, to the east and the south. In Powell County the Ashley pool was opened in 1917. In 1918 the Big Sinking pool was opened in Lee County. And in Allen County the Gainesville pool was opened in 1919. These pools produced from depths ranging from 800 to 1300 feet. And the Allen County pool produced from a porous limestone at depths ranging from 250 to 350 feet.

The peak development and subsequent falling-off of these pools by 1919 necessitated further exploration, which resulted in the bringing in of new productive areas, chief in importance of which was the tri-county area comprising Ohio, Daviess and Hancock Counties, brought in by the Newman Oil Company on the Jackson farm near Pellville in 1920, in the Cypress sandstone at a depth of 607 feet. Unfamiliarity with the formation confused the driller who named the oil-bearing sand after the owner of the property—Jackson—by which name it subsequently was universally known.

From 1920 on the development of the Western Kentucky area was rapid, and fairly complete.

The very nature of the formations in the Western Kentucky area makes difficult the proper allignment of pools and fields. Concensus has it that there is not a definite field, or a series of connected fields.

Geology

Geologically, Western Kentucky pre-

Two pictures, showing a drilling well and storage tanks, give an idea of the topography of the Western Kentucky shallow oil producing area

sents many promising areas for the development of oil pools.

Here geophysical work seems to indicate that present producing areas may be further developed by deep drilling.

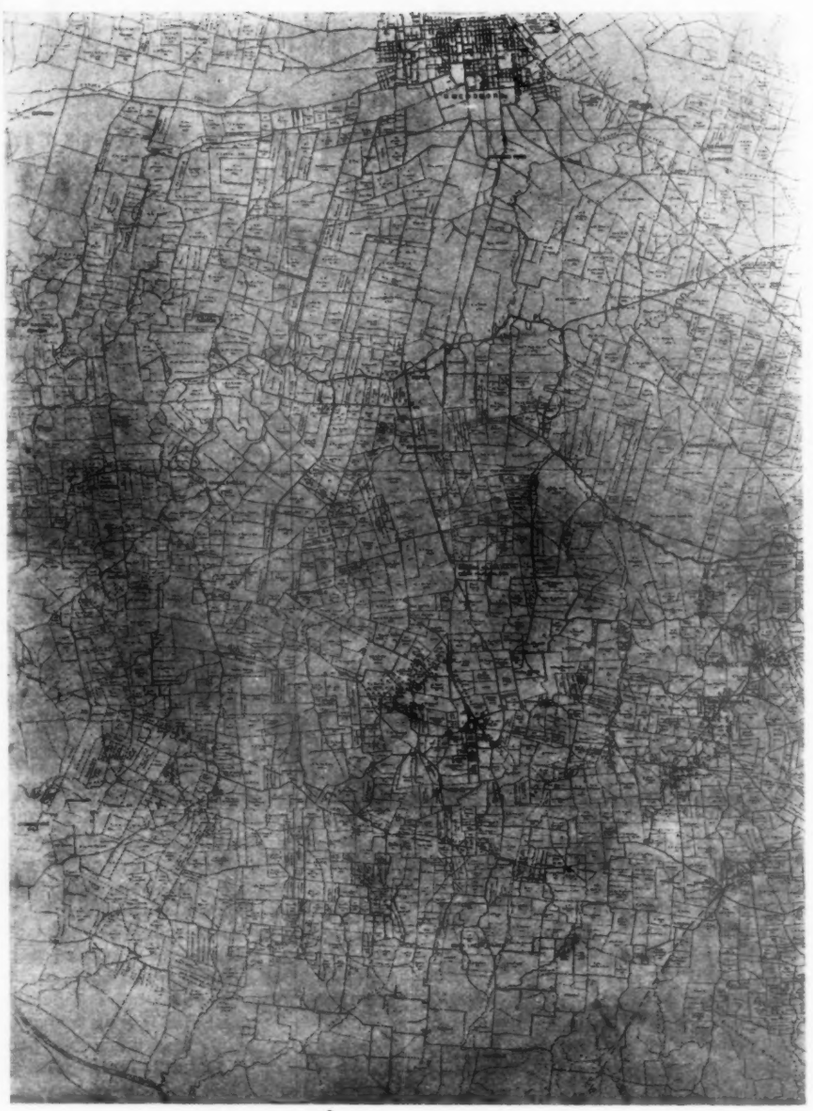
In Cumberland County where the Devonian and Ordovician are on the surface, 11 different oil sands have been found, and in Western County these same pays have been found at depths corresponding to the Devonian, Silurian, Mississipian, and Pennsylvanian.

The great Cincinnati arch passes north and south through the central portion of Kentucky, and embraces a strip of the state about 75 miles wide. The northern half of Central Kentucky is located on a great dome on the arch of which Cincinnati is about the center and the remainder of the dome is in Ohio, with the apex of the dome in Jessamine County, Kentucky. Just below the Kentucky-Tennessee line and in Tennessee is another dome on the arch known as the Nashville dome. Between these two domes and in the southern half of Central Kentucky, is a saddle on top of the broad arch which is an area about 75 miles square.

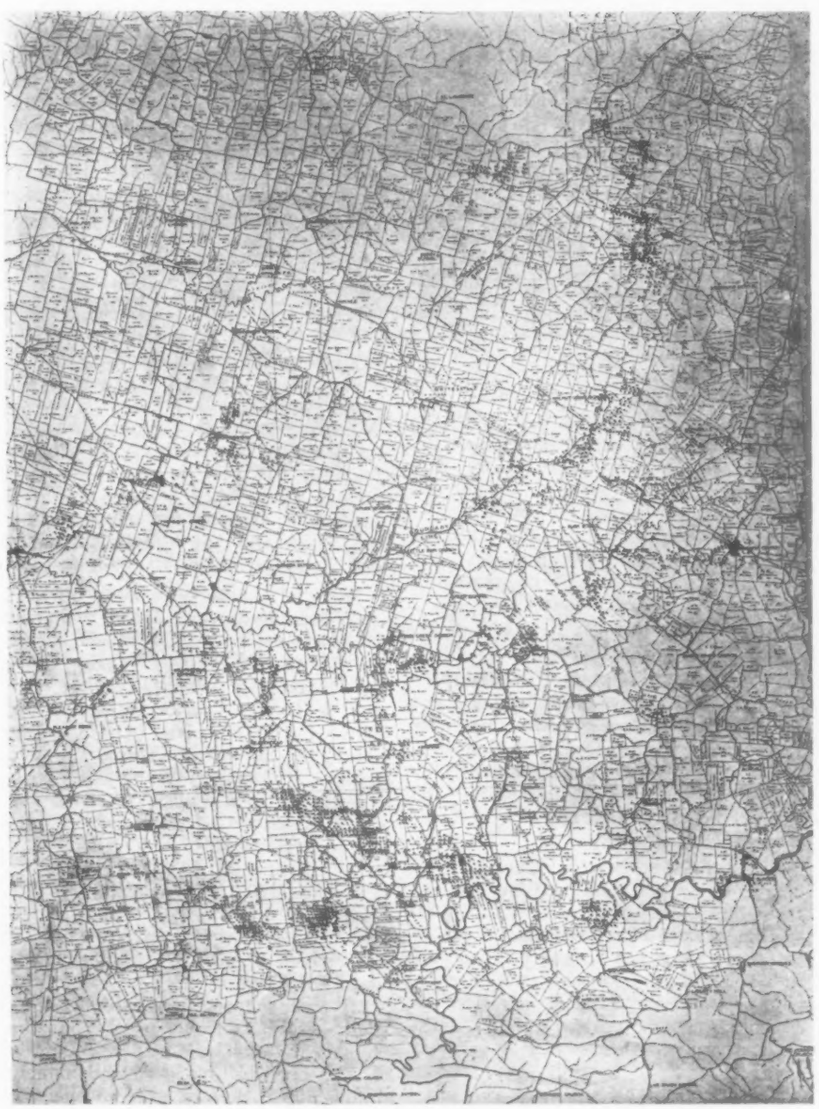
The surface rock in this saddle is chiefly Mississippian, and it is chiefly in this saddle that the shallow drilling territory in Kentucky lies. There is some shallow production on the flanks of this dome too. Counties laying in this area include: Allen, Barren, Hart, Larue, Monroe, Metcalfe, Greene, Taylor, Casey, Adair, Russell, Cumberland and Clinton.

Paralleling this axis and on the flanks of this arch are many smaller structures, on or near which lie potential producing areas.

In Western Kentucky and on the western flank of the Cincinnati anticline the old formations dip successively under one another until about 75 miles west of the Ordivician exposure the Pennsylvanian is the surface rick over the lower end of the Illinois Coal Basin, where it projects



Below is a map of the tri-county section of Western Kentucky, near Owensboro. Parts of Ohio, Davies and Hancock Counties are included



into Kentucky. Henderson County is located at the deepest part of the basin, and from there it rises to the south, east and west until the Mississipian emerges from under it on at least three sides. This gives the oil operator an advantage of having additional porus strata over this territory, which has been found to contain oil. Counties in this area include: Ohio, Hancock, Muhlenberg, Daviess, Hardin, Caldwell, Christian, Hopkins and Henderson.

The old production at Pellville runs in a southwesterly direction to the Midkiff pool, which in turn is about three miles northeast of the Ambrose pool in Ohio County. The Ambrose pool gets production from the Barlow lime, which is just below the Jackson sand, at a depth of from 650 to 750 feet. Between the Midkiff pool and the Ambrose pool is some production in the Jett sand at from 480 to 530 feet.

East of the old production about five miles a string of production running north and south and paralleling the old Pellville pool, has been opened up, with the center of the new pool at Friendship church, Ohio County, in the Jones and Barlow formations. These formations are found at the following depths: Stray, 500 feet; Jett, 575; Jones, 650; Jackson, 725; Barlow, 800; Bethel, 875; and McClosky, 950.

Four miles south of the Friendship pool and east of McGan is a Jones sand well. Southwest of that is the Dundee pool in the Jett sand. Going north from the Friendship church pool, the Jackson sand gas production is found all the way to the Hancock County line and over at Victoria in Hancock County gas production has been opened up either in the Jackson or Barlow formations, opinions differ on this matter, but the majority believe the producing formation to be the Jackson.

Across the Ohio river from this pool

at Troy in Indiana, Spencer County, and just north of Hancock County, a small Jett pool has been opened. In this same area there is some Barlow production, one Bethel well, and one well in the Mississippi lime. Northeast of Troy and southeast of Bristow, there is considerable activity, with several rigs running. Plans call for drilling to the Bethel.

East of Livermore, in Western Ohio, County there is a well in the Bethel at 1565 feet.

It must be explained that the formations are found deeper from east to west, with a normal drop of 30 feet to the mile in all formations. However, there are exceptions to this general rule, as for example the production north of the Hayden pool on the Riddle, Davis, and Purcell farms in Daviess County, where the Jett formation drops 200 feet in going 2000 feet, and produces all the way down this steep dip.

In the southern part of Ohio County the Ambrose, Hamilton and Sunnydale pools comprise a connected field, although the producing sands range in depth from 500 to 700 feet. Paralleling these pools is a string of Stray production, the most prolific of the entire area. The Stray is found at from 450 to 600 feet, and many of the wells are making as much as 400 barrels. Little gas is noticeable, but there is sufficient gas pressure to flow the wells.

Other Pools

Other pools in Ohio and Daviess Counties include: In Ohio County, Weller, Kirk, Barnett creek church, Wiggington, and Friendship church; and in Daviess County, Utica, Hayden, Red Hill, Salmon and Jones.

Then there is the Park pool in the Jones sand at 925 feet, the Sutton pool in the 90-foot Stray at a total depth of 600 feet, the Hayden pool at 1000 feet; the Davis-Purcell from 700 to 900 in the Jett; the Burton pool in the Jet, which lies just northeast of the Park and Purcell pools, and at a depth of 775 feet; and northeast of the Burton is the Salmon pool in the Jones at from 800 to 850.

Northeast of the Cain Run school is a string of Jones production. Then east of the school is the Cook gas field in the Jones sand. This field is pierced by lines owned by the Missouri-Kansas Pipe Line Company, and the production provides the majority of home users of gas in the city of Owensboro to the north.

A half mile southeast of the Cook gas field is the Howard pool which gets production in the Jett sand at 650 feet. A half mile northwest of there is the Jones pool (where the sand formation first got its name) production is found in the Jones sand at 775 feet. Then five miles northeast of the Jones pool is the Robey pool in the Jett at 500 feet.

One of the most promising pools in the area is the Brown pool, a mile northwest of the Utica producing area. Production in this pool came simultaneously with that in the Jones pool, and at the same depth. As a result, some operators identify this producing sand as the Brown sand, others the Jones sand; but they are essentially the same formation.

Muhlenburg County

Outside of the three counties—Ohio, Hancock, and Daviess—some production has been found in Muhlenburg County in the Mississippian lime formation, known more widely as the McClosky, at from 1500 to 1600 feet. Considerable skepticism was evidenced at first—partly because any new production is watched carefully, but partly because of the very nature of the formation — regarding the pumping ability of these wells; but the new district is now showing a good settled production, and Producers Pipe Line Company extended its line into the field to handle the production. The oil in this area is of good quality, and of much higher gravity than that found in the tri-county area.

This greatest of shallow producing areas, however, is not a large-company field, in as much as the usual overhead necessitated by the employment of a full quota of engineers, geologists and other technicians, cannot usually be met by the immediate development of large production. This is partly due to the nature of the formations (which are so irregular as to be difficult to develop production over wide areas), and partly because of the nature of the leases, which have been closely held, but widely.

Economy of production in the tri-county field is of greatest importance due to a number of factors. First in consideration is the improved condition of main roads in this section of Kentucky, making possible savings in hauling equipment. Secondly actually upon the ground, or closely adjacent, there is an abundance of coal for the operation of boilers, and for other purposes. Thirdly, in Owensboro all of the principal oil field supply houses are located; and in addition, there are hardware, mill supply, machine shops, fishing tool operators and equipment, well shooters and well-shooting equipment, etc. Then there is the saving on the cost of supplies for field operation, at the rate of about $100 per car lot, because the freight rate maintained in Owensboro is low to compete with the water craft operated on the Ohio river.

In the transportation of oil, there are three outlets: water, rail and pipe line.

Pipe Lines

Two pipe line companies operate in this area, Producers Pipe Line Company and Illinois Pipe Line Company, the latter a subsidiary of the Ohio Oil Company, the former a local company headed by Owensboro and Louisville capitalists, who also operate the Louisville Refining Company at Louisville.

Under the shut-down agreement, 11,000 barrels of oil are handled daily, 3000 by Producers Pipe Line Company and 8000 by Illinois Pipe Line Company. Much of the latter is moved to the plant of the Indian Refining Company at Lawrenceville, Illinois; while the former line, but 22 miles in length, moves the oil to Owensboro, where it is then moved by barge to Louisville.

In this field the aggregate cost of drilling and equipping wells, that is, put on pump with tanks and other necessary equipment, is $3500, with $5000 as a maximum cost and $3000 a minimum cost. These costs are figured on the basis of wells in the upper sands—the Stray, Jett, Barlow, Jones, Bethel and Jackson formations, in operations in the principal producing areas where the contours are not far above sea level. Some wells in Western Kentucky cost more than that, however, but the most prolific wells, producing from depths of from 450 to 700 feet, represent an average cost of $3500.

Practically all drilling is done with portable drilling machines and without the use of standard equipment and derricks. Since coal is right at hand and easily available, more than 75 per cent of the machines are powered with steam; and of this number, the great majority employ the separate power plant. However some operators are coming to use the portable spudders powered by gasoline motors, and which move to location under their own power. Other gasoline motored spudders are of the non-tractor type with the engine mounted on the machine frame, or with separate power. And almost universally the cable tool is used. There are but one or two exceptions.

Crude 36 Gravity

Western Kentucky crude varies greatly in color from the several formations, but has a uniform gravity of around 36 degrees, is a sweet oil of good gasoline content, is an asphalt base crude and contains a high percentage content of lubricating oil. Crude from Stray and Jett is a dark green in color; from the Jones comes crude of black hue; while the Barlow crude is a light green; and the McClosky or Mississipian, is a yellowish green.

Western Kentucky crude, while of slight inferior grade to the Eastern Kentucky crude, at least in gravity, has constantly commanded a higher price than the Eastern Kentucky crude. But one price-cut has been made in this crude, from $1.68 to $1.50 a barrel; while the crude from the Eastern area now brings but $1.32, and has suffered two price cuts during the past six months.

Some of the better known operators in Western Kentucky fields and who maintain headquarters in Owensboro include: H. C. Smith Drilling Company; Imperial Oil & Gas Products Company; Benedum & Trees; Wittmer Oil & Gas Company; Combs-McMahan Oil Company; Jetsan Oil Company; Pampas Oil & Gas Company; Missouri-Kansas Pipe Line Company; Cumberland Petroleum Company; Kenrow Oil Company; Petroleum Exploration Company; Pyramid Oil & Gas Company; Hupp & Duff; Mecca Oil Company; Ohio Oil Company; C. E. Daugherty & Company; Miller & Dameron; James Ellis; Eastern Gulf Oil Company; New Domain Oil Company; Standard Oil Company of Kentucky; Central Petroleum Company; Allied Oil Corporation; Shell Petroleum Corporation; Penn-Indiana Oil & Gas Company; Louisville Gas & Electric Company; and numerous individuals backed by local and neighboring capital.

Deep Sand Developments At Barbers Hill

By P. C. MURPHY and SIDNEY A. JUDSON
Humphreys Corporation

ABSTRACT

THE writers cover the development of Barbers Hill dome since 1924, which is the final date of the original article on this field by George Bevier. (1)

Barbers Hill is a large shallow salt dome located in the Texas Gulf Coastal plain in the general vicinity of other productive salt domes.

Oligocene sands have yielded wells of the gusher type from a 5100-foot sand horizon for the past 15 months, after years of former unprofitable exploration of shallower sands. A 10,000-barrel well from 6416 feet on an undeveloped flank of the dome is a deeper horizon in probable Oligocene formation indicates a new stratum, richer than those already found. Seventy-one deep producing wells have been drilled during this recent period. The production for 1929 totalled 4,487,000 barrels.

The accompanying paper was written by P. C. Murphy, assistant to the president of Humphreys Corporation, and Sidney A. Judson, chief geologist, Humphreys Corporation, for presentation before the American Association of Petroleum Geologists, New Orleans meeting, March, 1930, and is printed here with permission of the association.

The writers extend their thanks to Humble Oil & Refining Company, and the Pure Oil Company, from whose laboratories much of the paleontological data came. They also express their thanks to practically every operator at Barbers Hill for information and data received.

BARBERS HILL salt dome is located in the northwest part of Chambers County, Texas, about 27 miles east of Houston. Its position with relation to the nearby oil fields of South Liberty, Moss Bluff, Lost Lake, Goose Creek, Esperson and Humble is shown on Figure 1. This map also gives the relation of the dome to the Houston Ship Channel and the various nearby pipe lines and refineries.

The topographic expression of the dome consist of a hill, oval in shape, rising 45 feet out of the surrounding coastal plain.

History of Development

The early history of this field, up to August, 1924, has been fully described by George Bevier (4) in his article on Barbers Hill. Up to that time 120 tests had been drilled, of which 26 were producers. Of these, 10 were shallow tests for sulphur. The development included by the present writers begins at the end of the period covered by Mr. Bevier. Development, with possibly a single exception, had not penetrated deeper than the Miocene formation, in which a comparatively small production had been obtained on the southwest flank, amounting to a total of only 780,524 barrels.

On account of these discouraging results, there was no further development of the dome until 1926, when Mills Bennett Production Company drilled five additional wells on the southwest flank, adjoining previous producing wells. At practically the same time, Mills Bennett Production Company and Humphreys Corporation, drilling jointly, obtained production on the northwest flank of the dome in the upper Miocene or lower Pliocene sands. The discovery well, their A. E. Barber No. 1, had an initial flow of 500 barrels of 32 gravity oil. The location of well is found on a base map of the dome in Figure 2.

A total of 13 wells were drilled in the immediate area to this horizon, six of which were producers. The seeming lenticularity of the sand retarded further development. Two tests were carried below 3200 feet, but these developed no deeper production, although shows of oil were obtained.

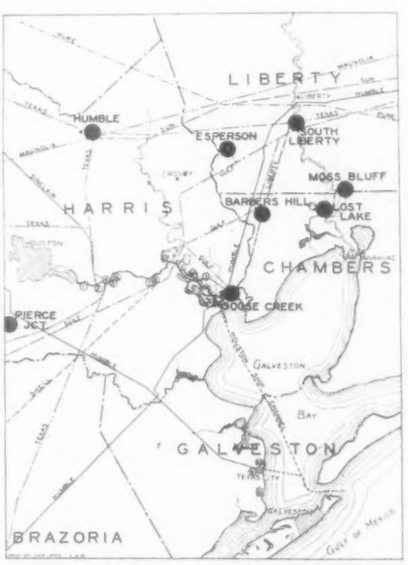


FIGURE 1. MAP SHOWING POSITION OF NEAR BY OIL FIELDS PIPE LINES REFINERIES & HOUSTON SHIP CHANNEL WITH REFERENCE TO BARBERS HILL

A few months later, in November, 1926, Mills Bennett Production Company and Humphreys Corporation, again drilling jointly, found a better Miocene sand on the northeast flank of the dome. The discovery well, Kirby B-2, flowed 800 barrels of 25 gravity oil from sands from 4091 feet to 4174 feet. Two additional producers, Kirby B-3 and B-4, were obtained offsetting this well. The Humphreys Corporation Kirby B-5 was drilled 150 feet closer to the dome in an effort to hit these sands higher. This well struck caprock from 2193 feet to 2223 feet, and lost returns in a cavity just below it. This well, however, was drilled deeper and went back into sedimentary beds and continued through a section of alternating gumbo, shale and sands to a depth of 4950 feet, where the hole was junked. This well reached the Discorbis zone of the Oligocene at 4804 feet. This was the first well at the dome to find thick sedimentary beds under caprock.

Mills Bennett Production Company's Kirby 1, 500 feet farther to the south along the dome, missed the 4100-foot Miocene sand horizon and tested salt water in a partially saturated sand from 4953 to 4995 feet in the Discorbis zone of the Oligocene. This well was carried to the Heterostegina zone of the Oligocene and completed at total depth of 5468 feet, making a 200-barrel producer. The well, however, flowed pipe line oil for a few hours at the rate of 1200 barrels per day before water broke in from an upper sand. This was the discovery well of the prolific horizon now producing on the east and south flanks. This led to the drilling of Mills Bennett Production Company's Smith 1, 325 feet south, which was completed October 9, 1928, for an initial flow of 4000 barrels of 27 gravity oil from a depth of 5240 feet to 5278 feet and which definitely established a sand of gusher type on this dome. The area immediately adjoining this to the south is divided into small tracts and was drilled up without delay. In an area 1600 feet long and 200 feet to 300 feet wide, 36

Table 1—Development at Barbers Hill, Sept. 1, 1924—Jan. 31, 1930.

C—caprock; S—salt; HL—Heterostegina lime.

Operator and Tract—	Well No.	Date Completed	Initial Prod.	Total Depth	Remarks
M. Bennett Prod. Co., Barrow E. E.	3	4-12-26	200	3070	
M. Bennett Prod. Co., Barrow, E. E.	4	6-19-26	400	3212	
Bennett-Moody, Barrow, E. E.	5	3-17-27	800	4551	
Bennett-Moody, Barrow, E. E.	6	1-25-27	Dry	5055	
Bennett-Moody, Barrow, E. E.	7	5-13-27	300	3900	
Bennett-Moody, Barrow, E. E.	8	8- 8-27	200	3356	C 4803-4868
Bennett-Moody, Barrow, E. E.	9	10- 6-27	600	3212	
M. Bennett Prod. Co., Collier	1	12- 5-29	10	5490	HL 4937-4966
M. Bennett Prod. Co., Collier	2	1- 9-30	890	5408	
M. Bennett Prod. Co., Hamman	1	6- 1-29	1500	5195	HL 4840-4897
M. Bennett Prod. Co., Hamman	2	7-24-29	3500	5143	HL 4790-4837
M. Bennett Prod. Co., Hamman	3	12- 1-29	50	5166	HL 4852-4903
M. Bennett Prod. Co., Japhet	4	3- 4-26	Dry	4070	S 4060-4070
M. Bennett Prod. Co., Japhet	6	-26	Dry	....	
M. Bennett Prod. Co., Japhet	7	4-24-26	Dry	2950	
M. Bennett Prod. Co., Japhet	8	5- 7-27	Dry	3007	
M. Bennett Prod. Co., Barber, E. W.	1	10-12-29	Dry	6282	C 2440-2565 HL 5263-5332
M. Bennett Prod. Co., Kirby Pet. Co.	1	11-20-27	1200	5468	HL 5129-5146 Oligocene sand discovery well on east flank.
M. Bennett Pet. Co., Kirby Pet. Co.	2	4- 8-29	380	5397	HL 5095-5163
M. Bennett Prod. Co., Means, J. B.	1	4- 6-29	1850	5255	HL 4922-4995
M. Bennett Prod. Co., Means, J. B.	2	1-31-30	1900	5137	HL 4930-4963
M. Bennett Prod. Co., Smith	1	10- 9-28	4000	5272	HL 4973-5041
M. Bennett Prod. Co., Smith	2	5-22-29	1400	5197	HL 5059-5119
M. Bennett Prod. Co., Smith	4	12-12-29	2600	5357	
M. Bennett Prod. Co., Wilburn	1	12-12-29	600	5194	HL 4783-4845
M. Bennett Prod. Co., Wilburn	2	1-23-30	1565	5159	HL 4810-4869
Barclay & Meadows, Barber, A. E.	1	-26	150	2204	
Barcleay & Meadows, Barber, A. E.	2	-26	150	2239	
Barclay & Meadowns, Barber, A. E.	3	-26	Dry	2000	
Joe Bashara, Tarbutton	1	4-22-29	750	5236	C 2112-2257 HL 4927-5006
Bennett-Humphreys, Barber, A. E.	1	5-14-26	500	2245	Discovery well nw flank.
Bennett-Humphreys, Barber, A. E.	2	8- 1-26	Dry	3488	
Bennett-Humphreys, Barber, A. E.	3	8-15-26	150	2230	
Bennett-Humphreys, Barber, A. E.	4	9-22-26	Dry	2459	
Bennett-Humphreys, Barber, A. E.	5	12-19-26	Dry	3215	
Bennett-Humphreys, Kirby Pet. Co.	1-A	3-10-26	Dry	1582	
Bennett-Humphreys, Kirby Pet. Co.	2-A	8- 7-26	Dry	3137	
Bennett-Humphreys, Kirby Pet. Co.	3-A	9-23-26	530	2205	
Bennett-Humphreys, Kirby Pet. Co.	4-A	10-12-26	Dry	2546	
Bennett-Humphreys, Kirby Pet Co.	1-B	8-23-26	Dry	1789	C 1785-1789
Bennett Humphreys, Kirby Pet. Co.	5-A	2- 1-27	100	2257	
Bennett-Humphreys, Kirby Pet. Co.	2-B	11- 7-26	300	4118	
Bennett-Humphreys, Kirby Pet. Co.	3-B	1-19-27	800	4425	HL 5087-5148
Gulf Prod. Co., Fisher Fee	1	5-18-29	1000	5590	HL 4883-4949
Gulf Prod. Co., Wilburn	1	12-10-29	450	5216	
Hindman, J. S., Bullock	1	4-25-25	Dry	3330	HL 5485-5542
Humble O. & R. Co., Kirby Pet. Co.	1	-27	Dry	5789	C 1147-1151
Humphreys Corp., Barber, E. W.	1-A	5- 6-28	Dry	1151	C 1343-1358
Humphreys Corp., Barber, E. W.	2-A	8-17-28	Dry	1358	
Humphreys Corp., Barber, E. W.	3-A	12-16-28	Dry	2606	C 2140-2216 HL 5042-5115
Humphreys Corp., Barber, C.	1	3- 5-29	2300	5194	C 2029-2242 HL 4842-4874
Humphreys Corp., Ilfrey	1	8-16-29	1650	5165	
Humphreys Corp., Kirby Pet. Co.	6-A	12-13-27	Dry	2397	C 2925-3259 S 3259-3460
Humphreys Corp., Kirby Pet. Co.	7-A	5- 4-29	Dry	3464	HL 5408-5510
Humphreys Corp., Kirby Pet. Co	8-A	1- 4-30	10,262	6416	
Humphreys Corp., Kirby Pet. Co.	4-B	6-27-27	100	4150	
Humphreys Corp., Kirby Pet. Co.	5-B	10-27-27	Dry	4949	HL 4922-4997
Humphreys Corp., Kirby Pet. Co.	1-C	1- 3-29	2500	5223	C 2135-2186 HL 4754-4843
Humphreys Corp., Kirby Pet. Co.	1-H	8-23-29	1700	5071	HL 4865-4935
Humphreys Corp., Kirby Pet. Co.	2-H	8-16-29	2300	5248	Discovery well ne flank.
Humphreys Corp., Kirby Pet. Co.	3-H	8-27-29	1875	5202	HL 4809-4873
Humphreys Corp., Kirby Pet. Co.	4-H	10-11-29	1800	5123	HL 4723-4777
Humphreys Corp., Kirby Pet. Co.	5-H	10-17-29	1200	5130	HL 4760-4812
Humphreys Corp., Kirby Pet. Co.	6-H	10-28-29	1736	5108	C 2095-2165 HL 4705-4756
Humphreys Corp., Kirby Pet. Co.	7-H	11-14-29	720	5055	C 2087-2167
Humphreys Corp., Higgins	1	12- 4-28	25	857	C 815-857
Humphreys Corp., Higgins	2	10-16-29	15	841	C 821-841
Humphreys Corp., Scott	1	12-14-29	Dry	2006	C 1626-1889 S 1889-1927 C 1927-1979 S 1979-1991 C 1991-2019 S 2019-2906
Humphreys Corp., Tarbutton	1	8-28-29	1600	5224	C 2081-2263 HL 4955-5038
Humphreys Corp., Wilburn	1	9-21-29	Dry	922	C 893-922
Sam Hindman, Fisher	1	12- 1-27	Dry	4600	
Humble O. & R. Co., Meyers Fee	4	11-20-27	100	3060	
Humble O. & R. Co., Meyers Fee	5	-28	100	3000	
Mount Belvieu Oil Co., Williams, M.	1	5- 1-28	Dry	4556	
McAlbert, Woodward	1	9-16-29	700	5132	HL 4925-4974
McAlbert, Woodward	2	9-13-29	1800	5252	HL 4968-5022
McAlbert, Woodward	3	11-14-29	1800	5323	HL 4923-4963
Moody-Humphreys, Collier	1	10-11-29	850	5083	HL 4760-4830
Moody-Humphreys, Collier	2	10-16-29	700	5134	HL 4836-4877
Moody Corp., Ilfrey	1	8- 5-29	2694	5140	HL 4789-4849
Moody Corp., Ilfrey	2	11-21-29	200	5184	HL 4785-4843
Rexall Pet. Co., McLean	1	5-10-29	Dry	3908	
Rexall Pet. Co., McLean	2	7-25-29	1500	5259	
Rexall Pet. Co., McLean	3	12-20-29	100	5226	
Rexall Pet. Co., McLean	4	8- -29	294	5174	HL 4884-4946
Rexall Pet. Co., Smith	1	12-30-29	80	2150	
Rexall Pet. Co., Shaw	1	3-16-29	650	5207	C 2044-2090 HL 4874-4926
Republic Prod. Co., Kirby Pet. Co.	1	7-27-29	3420	5194	HL 4916-4956 Discovery well se flank.
Republic Prod. Co., Kirby Pet. Co.	2	9-21-29	580	5351	HL 5023-5080
Republic Prod. Co., Kirby Pet. Co.	3	1-11-30	60	5335	HL 4997-5074
Sinclair O. & R. Co., McKinney Fee	1	1- 1-30	Dry	5958	HL 5070-5128
Sinclair O. & R. Co., Wilburn, J.	1	10-13-29	510	5228	HL 4903-4967
Sinclair O. & R. Co., Wilburn, J.	2	1-23-30	1558	5160	HL 4810-4880
Sun Oil Co., Chamber Co., AA.1		6- 7-29	250	5677	
Sun Oil Co., Chamber Co., AA.2		6-24-29	2000	5489	HL 5010-5065
Sun Oil Co., Chambers Co. AA.3		9- 1-29	2503	4666	
Sun Oil Co., McKinney Fee	1	9-30-29	500	5346	HL 5015-5065
Sun Oil Co., McKinney Fee	2	11-16-29	Dry	5730	
Sun Oil Co., Wilburn, J.	1	11-6-29	960	5361	HL 4963-5033
Sun Oil Co., Wilburn Fee	1	1- 6-30	Dry	5456	HL 5034-5086
Sun Oil Co., Wilburn Fee	2	12-29-29	1020	5314	HL 4920-4982
Talbert & Markle, Ilfrey	1	5-18-29	1700	5190	HL 4919-4967
Talbert & Markle, Schilling	1	7- 2-29	850	5196	
The Texas Company, Wilburn	1	11-18-29	175	5177	HL 4791-4850
The Texas Company, Wilburn	2	11-20-29	712	5112	HL 4711-4770
The Texas Company, Wilburn	3	10-31-29	728	5101	HL 4720-4777
Dr. Thompson, Wilburn	1	10-16-29	1000	5084	HL 4725-4787
Unice Oil Co., Feldman-Gulf	1	6-10-29	600	5231	C 2120-2170 HL 4898-4973
Yount-Lee Oil Co., Chambers Co. AA.1		1-29-29	4700	5318	HL 4869-4964—Oligocene sand discovery well on s flank.
Yount-Lee Oil Co., Chambers Co. AA.2		3-27-29	1125	5329	HL 4883-4967
Yount-Lee Oil Co., Chambers Co. AA.3		4- 8-29	1200	5329	
Yount-Lee Oil Co., Chambers Co. AA.4		9-21-29	Dry	8184	HL 5473-5559
Yount-Lee Oil Co., Chambers Co. AA.5		5- 3-29	Dry	2570	S 2456-2570
Yount-Lee Oil Co., Chambers Co. AA.6		6-20-29	1680	5002	
Yount-Lee Oil Co., Chambers Co. AA.7		8-16-29	2310	5302	HL 4888-4954
Yount-Lee Oil Co., Chambers Co. AA.8		10-27-29	100	5236	HL 4922-4981
Yount-Lee Oil Co., Chambers Co. AA.9		11-23-29	1900	4841	
Yount-Lee Oil Co., Kirby Pet. Co.	1	10-25-29	Dry	7512	HL 5234-5312
Yount-Lee Oil Co., Phillips 1	1	12-21-29	1290	5294	
Yount-Lee Oil Co., Richardson	1	12-20-28	10	2075	
Yount-Lee Oil Co., Richardson	2	1-25-29	30	2080	
Yount-Lee Oil Co., Richardson	3	2-23-29	Dry	2217	
Yount-Lee Oil Co., Richardson	4	3-30-29	Dry	2279	
Yount-Lee Oil Co., Woodward	1	9-13-29	585	5459	HL 5053-5132
Yount-Lee Oil Co., Woodward	2	10- 7-29	1890	5347	HL 4947-5002
Yount-Lee Oil Co., Woodward	3	10-31-29	2440	5364	HL 4928-4984
Yount-Lee Oil Co., Woodward	4	12- 1-29	630	5347	HL 4955-5008
Yount-Lee Oil Co., Woodward	5	12-21-29	560	5350	HL 4941-4967

wells were drilled. Most of these were completed as good flowing wells.

In the meantime, on January 29, 1929, Yount-Lee Oil Company completed their Chambers County Agricultural Association 1 for an initial flow of 4700 barrels from sands from 5107 feet to 5318 feet. This well is on the south flank of the dome and is producing from the same zone as the wells on the east flank. A narrow line of flowing wells along the dome were obtained in this area. The Yount-Lee Chambers County Agricultural Association 4, which was completed as a dry hole at a total depth of 8148 feet, is the deepest well ever drilled in the Gulf Coast.

An area midway between these two groups of wells was opened by the Republic Production Company's Kirby 1, completed July 27, 1929, for 3420 barrels initial production from a total depth of 5194 feet from the same horizon of the Oligocene as the two earlier areas mentioned above. Encouraged by the success obtained in the two former deep sand areas, the various operators quickly started a number of wells in the vicinity immediately adjoining this well. Most of these were completed as flowing producers, although the sizes of the first producing wells were somewhat more erratic than in the two other areas. Up to the present time 71 producing wells and six dry holes have been obtained in the deep sands on these flanks of the dome.

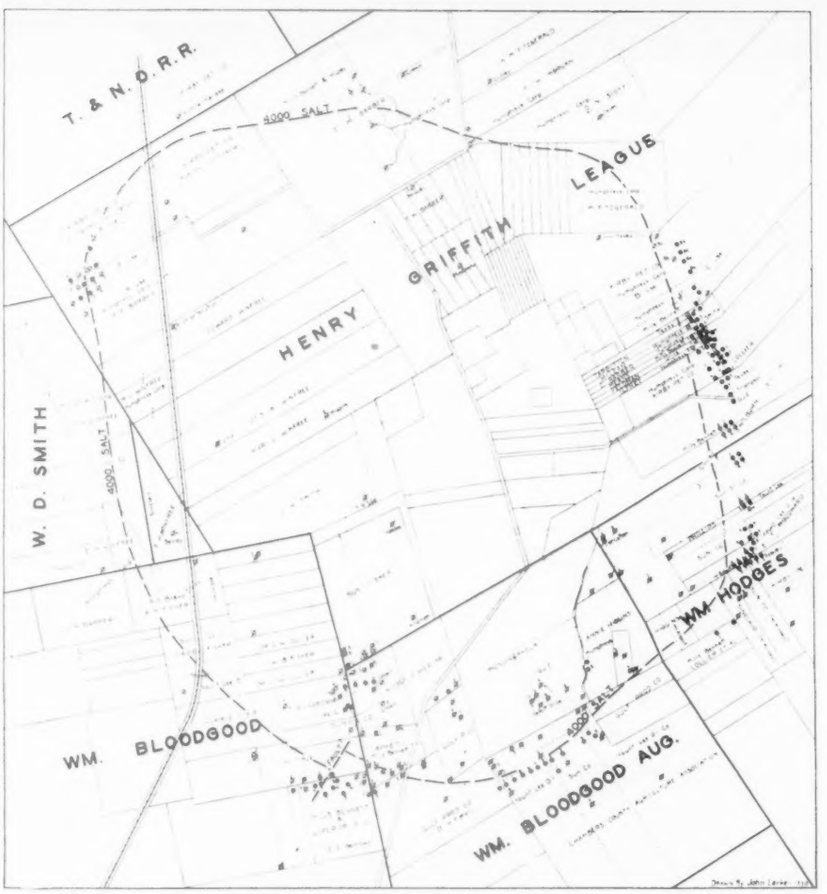


FIGURE 2. BARBERS HILL SALT DOME
CHAMBERS CO., TEXAS
SHOWS APPROXIMATE 4000 FOOT CONTOUR ON SALT
SCALE IN FEET

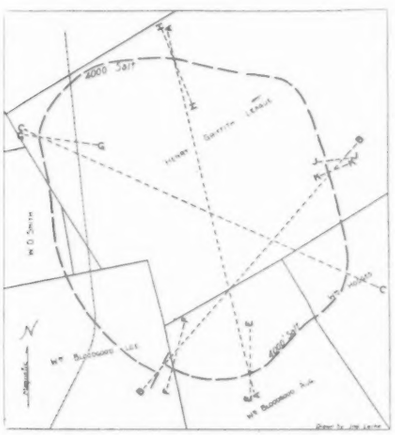


FIGURE 4
KEY MAP SHOWING LOCATIONS OF CROSS-SECTIONS
BARBERS HILL SALT DOME
SCALE

Humphrey's Corporation's Kirby A-8, located on the northwest flank close to several shallow wells and dry holes, and over two miles around the dome from the nearest deep production, was brought in January 4, 1930, for an initial flow of 10,262 barrels per day of 34 gravity oil. Production comes from sand between 6397 feet and 6416 feet, which is probably in the non-fossil zone of the lower Oligocene, although positive paleontological evidence has not been found. It is the deepest producer in the Gulf Coast of Texas, although two deeper producers

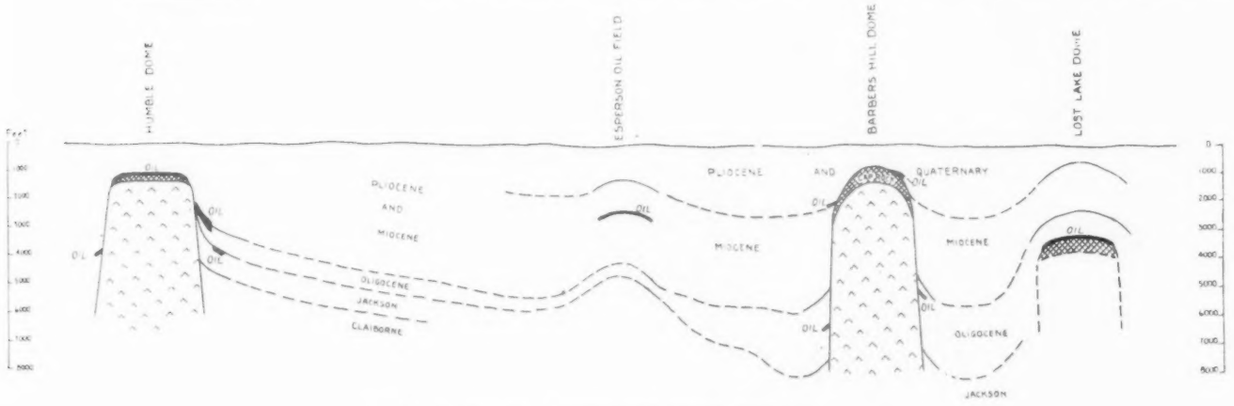


FIGURE 3. NW-SE. GENERALIZED CROSS SECTION
through
HUMBLE, ESPERSON, BARBERS HILL & LOST LAKE OIL FIELDS
Vertical scale exaggerated to approximately 5 times that of horizontal

Drawn by-Jno Larke

have been obtained in the Gulf Coast of Louisiana at the Jennings salt dome.

Sub-Surface Geology

The intrusion of the salt plug through the surrounding formations is shown on the northwest southeast cross section in Figure 3, with its relation to the uplifts at Humble, Esperson and Lost Lake domes.

Humble and Barbers Hill are alike in that the salt in these domes has pushed its way up close to the surface through the Miocene and Oligocene, and the oil in these two formations has collected in the sands against the sides of these domes. Humble, however, in contrast with Barbers Hill, has produced much caprock oil. On the other hand, the intrusive mass at Lost Lake and Esperson is much farther below the surface, and the oil produced up to the present has been found only in the formations above the dome. The flanks of these two domes have not yet been explored sufficiently to determine whether or not oil is present there.

The general characteristics of the dome at Barbers Hill, as well as its relation to the surrounding sediments, are indicated in sections across the dome, shown in Figures 5, 6 and 7. Figure 4 is a key map showing location of the cross sections.

The salt plug at Barbers Hill is oval in outline and is covered with thick successive layers of anhydrite, gypsum and secondary limestone, typical of the average coastal salt dome. The sides of the intrusive mass are apparently either approximately vertical, or with a slight inverted cone effect below 3000 feet, except on the southwest flank where salt was found in the Mills Bennett Production Company's Japhet 4 at 4060 feet. This is the only flank well on the dome that has reached salt below 4000 feet. The opposite flank of the dome, however, indicates that there the shallow cap and salt protrude out beyond the deeper salt body and form what is locally known as an "overhang." This condition is illustrated by the Humphreys Corporation's Ilfrey 2, in Section B-B, (Figure 6). The other two cross sections, A-A, (Figure 5) and C-C, (Figure 7), illustrate the more general shape of the dome in which the sides below 3000 feet are shown nearly vertical or slightly overhanding. Since only one well has reached salt below 4000 feet, sufficient data is lacking to determine whether the deeper salt is practically vertical or whether a considerable overhang exists. Additional details of the shape of the salt and cap on the various flanks of the dome are illustrated in Figure 8.

Sections H-H, J-J and K-K, (Figure 8), show exceptional instances of overhanging cap or salt which occur on the north and east. This dome is one of the few in which deep oil sands have been regularly found beneath protruding cap or salt. At least 16 wells on the east and north flanks have drilled through overhanging caprock and four wells have drilled through overhanging salt under the caprock. All of these wells went back into sedimentary formations immediately below the overhang and the formations be-

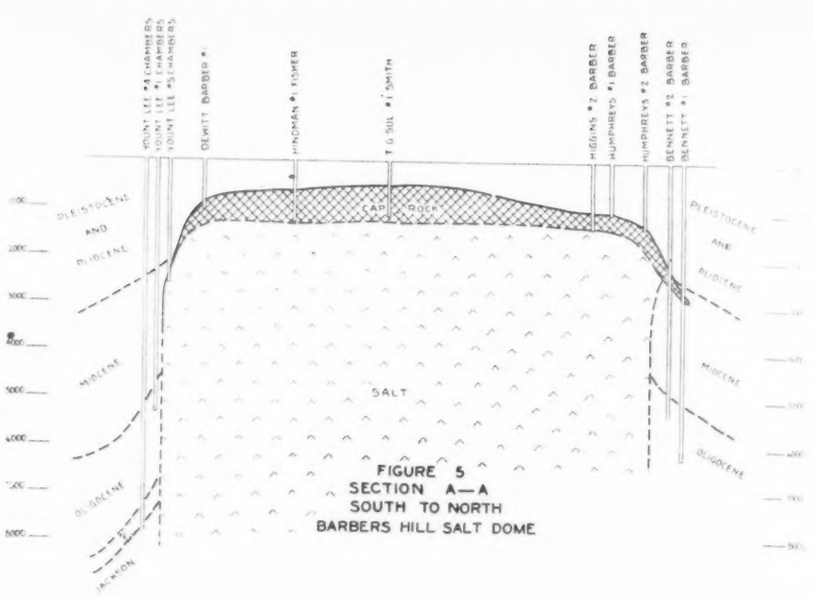


FIGURE 5
SECTION A—A
SOUTH TO NORTH
BARBERS HILL SALT DOME

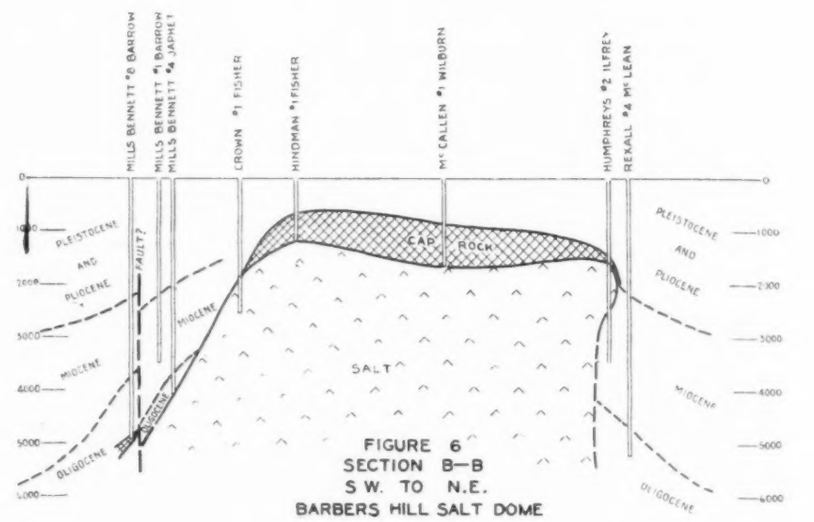


FIGURE 6
SECTION B—B
S.W. TO N.E.
BARBERS HILL SALT DOME

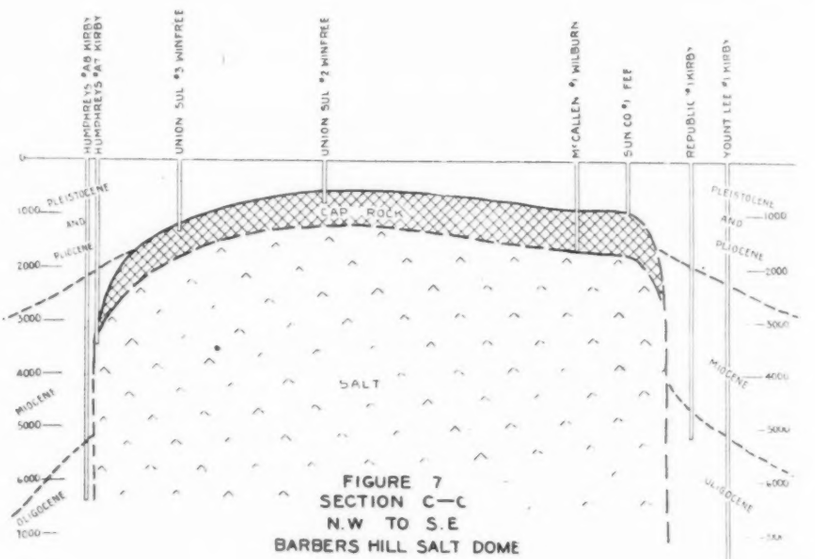


FIGURE 7
SECTION C—C
N.W. TO S.E.
BARBERS HILL SALT DOME

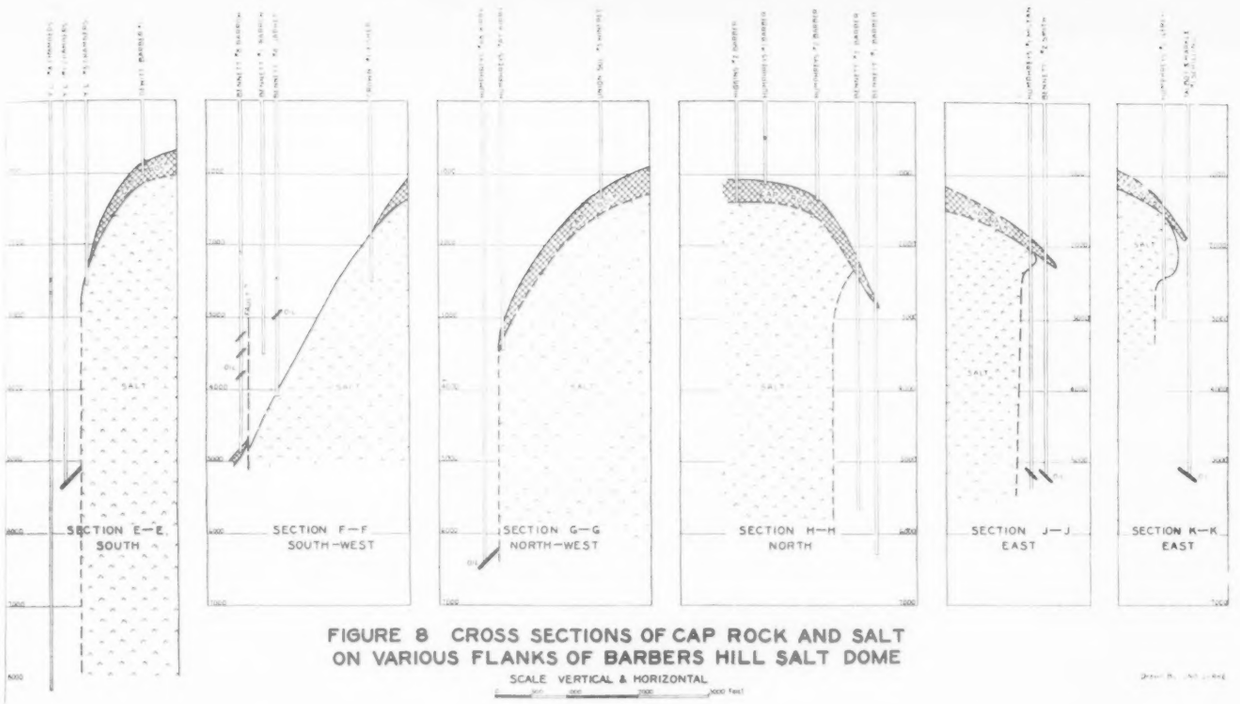


FIGURE 8 CROSS SECTIONS OF CAP ROCK AND SALT ON VARIOUS FLANKS OF BARBERS HILL SALT DOME

low were not noticeably affected by the overhanging cap and salt. The Humphreys Corporation's Ilfrey 2 drilled through 878 feet of salt between 1531 feet and 2409 feet and is now drilling in sedimentary formations at 4281 feet. These facts lead to the conclusion that on this dome at least, wells which reach salt water near a known steep flank should penetrate it at least 1000 feet before being abandoned. It is believed that this practice could well be extended to other domes with steep flanks, for few domes of this type have had the edges of the caprock and salt sufficiently explored to determine whether or not an overhang exists. Sections E-E, F-F and G-G, (Figure 8), illustrate nearly vertical or outward sloping salt on the west and south flanks.

The character of the anhydrite, gypsum and limestone caprock is described by Bevier (4). The especially thick caprock of the dome and the nearly vertical flanks allow accurate interpretation of torsion balance surveys in locating the position of the outside limits of the intrusion, although the amount of overhang of the salt body cannot be determined by these methods.

Stratigraphy

The columnar section in Figure 9 shows the stratigraphy as found in a type producing flank well close to the dome.

The sediments penetrated by the drill are successively of Pleistocene, Pliocene, Miocene, Oligocene and Eocene Age. The Pleistocene, Pliocene and Miocene have been described by Bevier (4) and Applin, Ellisor and Kniker (5). The Oligocene and the Jackson formation of Eocene Age are generally similar in character to descriptions of these formations on nearby domes by the last three writers. The contact between the Oligocene and Jackson is not yet fully determined by paleontological evidence, but the two probable lim-

(5) Sub-surface Stratigraphy of the Coastal Plain of Texas and Louisiana by Esther Richards Applin, Alva E. Ellisor and Hedwig T. Kniker, Volume IX, pages 79-122, A. A. P. G.

iting positions are shown in the columnar section in Figure 9.

It is of special interest to note the various incursions of lignitic shale into the basal Oligocene which allows this to be easily mistaken for the Jackson formation. Assuming the contact between the Oligocene and Jackson formations to be approximately 400 feet above the Textularia Hockleyensis zone in Yount-Lee Oil Company's Chambers County Agricultural Association 4, the total thickness of the Oligocene formation would be about 2100 feet. This amount is exceptionally great for the Oligocene, when compared with its thickness found on either nearby domes, or on those slightly farther inland from the coast, which are the ones in which the Oligocene has already been explored. This formation shows a large number of sand bodies, alternating with shales and gumbos on all flanks of the dome.

Structure of Surrounding Sediments

The dip of the surrounding sediments as they slope away from the dome is indicated in Figures 5, 6 and 7. The wells shown in these sections are assumed for this purpose to be straight. However, the surveys of at least 25 wells have proved that the average deep well deviates considerably from the vertical. Accordingly, sections based upon correlations between wells on known horizons, such as the Heterostegina lime, would be highly inaccurate in regard to dip when the deep wells are only a few hundred feet apart, as they are in most instances in the sections used. Since only a few of the surveys mentioned show direction as well as the diveiation of the hole, it is not possible without additional surveys to know the exact dip of the horizons. Dips are found in cores of shale and sandy shales, varying from an average of about 25 degrees in the Oligocene on the northeast flank to about 45 degrees in the same formation on the northwest flank. It is questionable whether these dips represent actual dip of the horizons, but they probably approximate them. It is not definitely known whether or not much faulting exists in the sediments on the flanks of the dome, although considerable local faulting appears to be present on the southwest flank in the vicinity of Mills Bennett Production Company's Barrow 8. Many supposed local faults are easily explained by crooked holes.

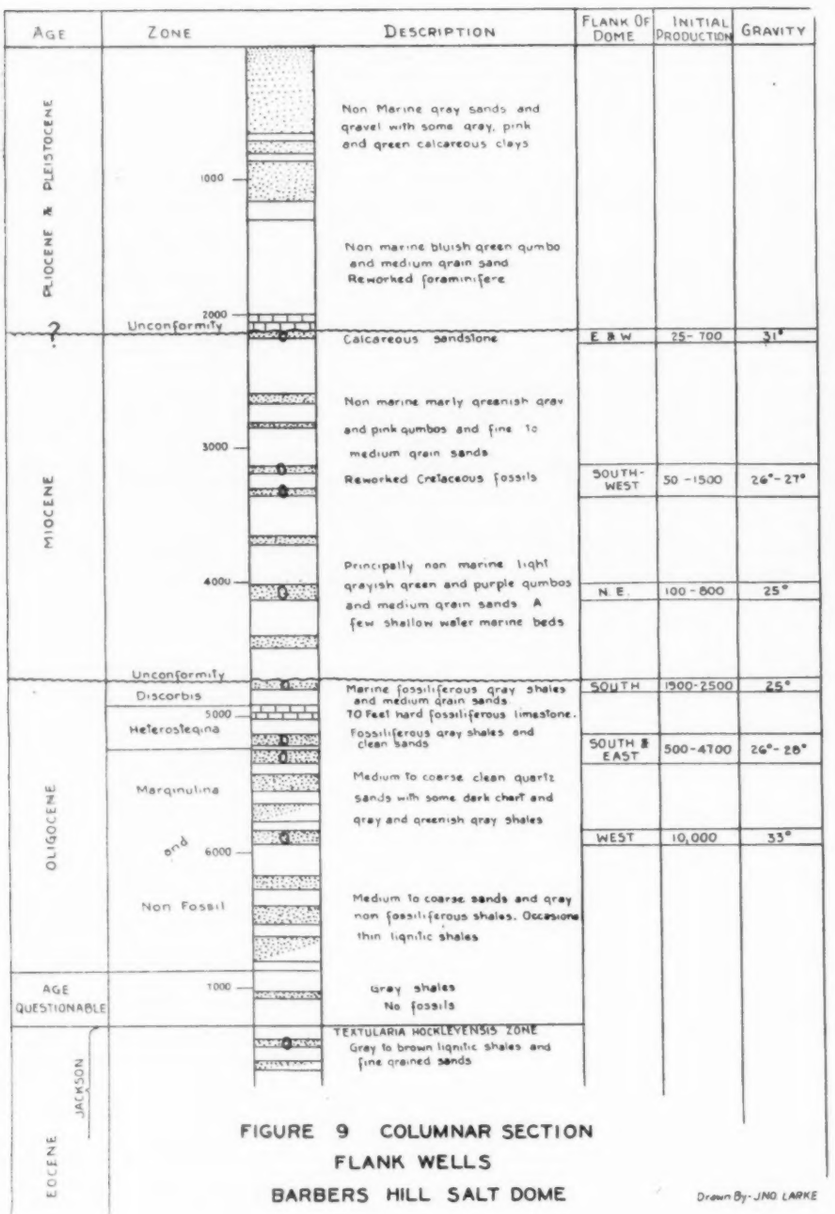


FIGURE 9 COLUMNAR SECTION
FLANK WELLS
BARBERS HILL SALT DOME

Drawn By- JNO LARKE

Drilling Methods

Drilling practice carried on in this field compares favorably with the methods used in the principal deep rotary fields of the Mid-Continent and California. Special methods have been developed to take care of the particular problems that naturally occur around an intrusion of salt and porous caprock surrounded by unconsolidated sands, shales and occasional hard beds of calcareous sandstone. Wells in the 5100 foot sand are completed in an average time of 50 to 60 days and usually require only one string of casing besides the surface string. The producing string is cemented in gumbo directly above the oil sand and liner and screen of proper mesh are then set in the sand and sealed off 100 feet or so above the bottom of the casing.

Where production is expected, sand sections are thoroughly cored. Core barrels which drill the full size of the hole and take cores up to 20 feet in length save considerable time. Surveys to determine deviation from vertical have been run in about 30 per cent of the wells, and surveys which show direction as well as amount of deviation have been made in about 10 per cent of the wells. When a hole is found to be very crooked it can usually be corrected by redrilling a part of it. Surveys greatly aid the geologist in considering the problems of new locations and proper drainage of the sand body.

Determinations of formations and their zones are made principally by paleontological examination. However, the Heterostegina lime of the Oligocene formation, consisting of 70 feet of hard fossiliferous limestone, and located about 150 to 200 feet above the 5100 foot pay zone, provides the operator with an accurate drilling marker. Subdivision of the sand bodies into their individual beds is aided by comparison of washed samples of the sands, which usually possess noticeably different characteristics which enable close correlations for short distances. Quantitative determinations of salt and oil content, combined with the observed gaseous odor, help in deciding whether or not to set screen in a particular sand. Experience has shown that a sand which will produce oil cannot usually be distinguished by any one of the tests mentioned but rather by a combination of all three.

Oil and Gas

Total production for the year 1929 was 4,487,000 barrels, Nearly all of this was produced from the Oligecene sands in

(Continued on page 76)

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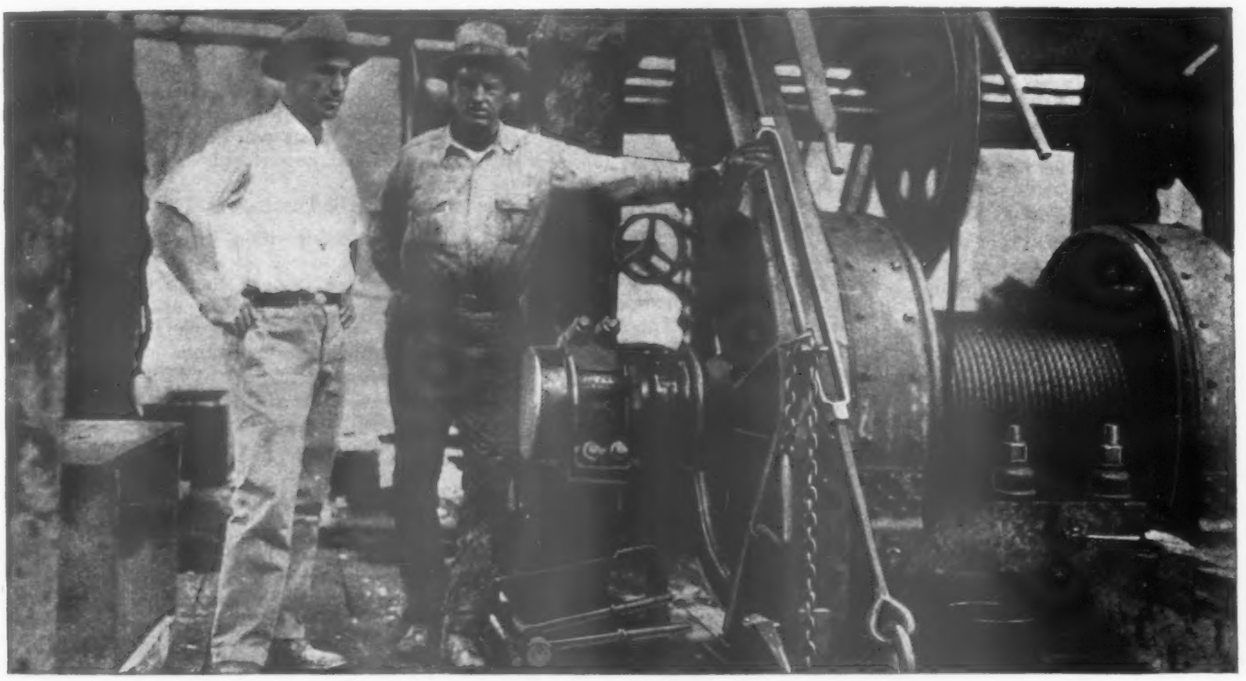

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New Hydraulic Pump for Deep Wells

A SIMPLY constructed and inexpensive hydraulic pump for use in deep oil wells has been invented and patented by Harry F. Childers of the Wentz Oil Corporation, Ponca City, Oklahoma. The pump has a double acting piston and valve arrangement for effecting the discharge of the oil from the well.

An education tube has been arranged in a cylindrical pipe. In order to prevent the admittance of the hydraulic lifting fluid to the lower portions of the pipe and to permit the double acting piston unit to operate in the lower portion of the education tube, a packer is carried by the education tube for engagement with the inner wall of the cylindrical pipe.

The pipe, arranged within the casing is reduced at the lower end to provide for an oil inlet. In the reduced portion is the valve cage unit, with the ball check valve. The education tube is spaced within the cylindrical pipe, with the lower end closed and upper open and extending upward above the upper end of the pipe, where it connects with the oil discharge tube. A tapered packer is set between the casing and pipe to seal the upper portion.

The education tube is formed with a hydraulic lifting fluid inlet and with the education tube, directly above the inlet port is the cup packer. The lifting chamber is the portion of the education tube directly below the packer and operable within this portion of the tube is the hydraulic piston that is secured at its upper end and to the lower end of an actuating rod that extends upward through the cup packer and the education tube to a walking beam that constitutes a part of the usual pump power mechanism.

Beginning with the piston (24) at the bottom or lower end of the stroke, the sliding cylinder (25), at the lower end of the shorter stroke with the plug (27) is adapted to rest on the lower end of the education tube (8). Further, the discharge port (37) in the lower end of the sliding cylinder will be in registration with the outlet port (31), and the inlet or suction port (38) on the lower end of the cylinder will be cut out of communication with the inlet port (33.)

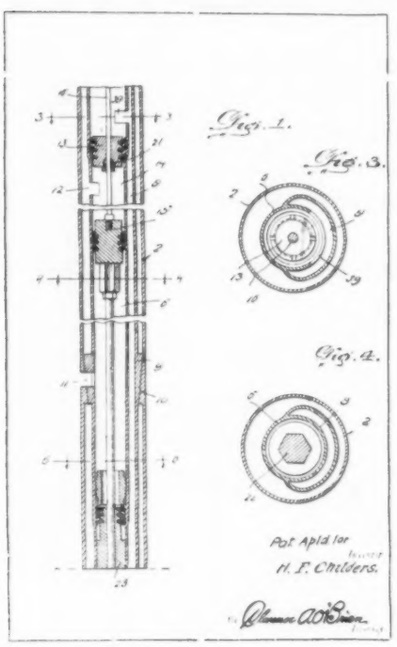
On the upper end of the sliding cylinder a reverse order takes place, that is to say, the intake ports (32) and (36) will communicate and the discharge ports (35) and (30) will be out of communication. This is the position of the sliding cylinder at the lower end of the piston (24) stroke so that the fluid being discharged through the outlet port will be sucked in through the intake port.

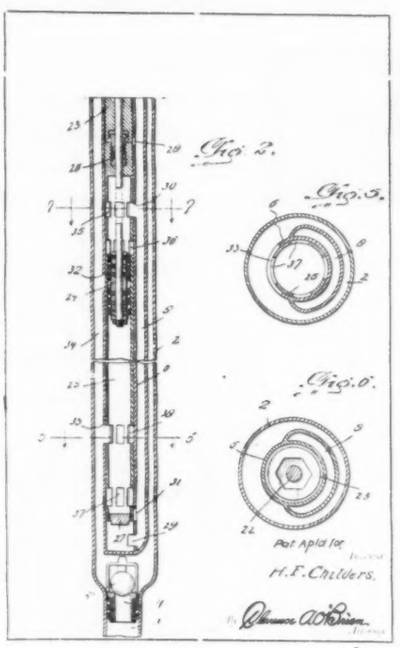
The upward movement of the piston (24) in the cylinder (25) will cause the fluid already sucked into the piston to flow back out through the communicating intake port above, but the ball check valve (5) will prevent the discharge of the oil from the oil chamber (34) back into the well. The oil thus prevented from escaping by the action of the piston (24) builds up sufficient pressure against the suction chamber and inside of the sliding cylinder to cause the sliding cylinder to move up until the opper end strikes the plug or stop (33), in which position the discharge ports (30) and (35) will be in registration with each other and the intake ports at the upper end of the cylinder and the adjacent portion of the induction tube will then be closed, while on the other end of the cylinder the suction or intake ports will be opened and the discharge ports closed.

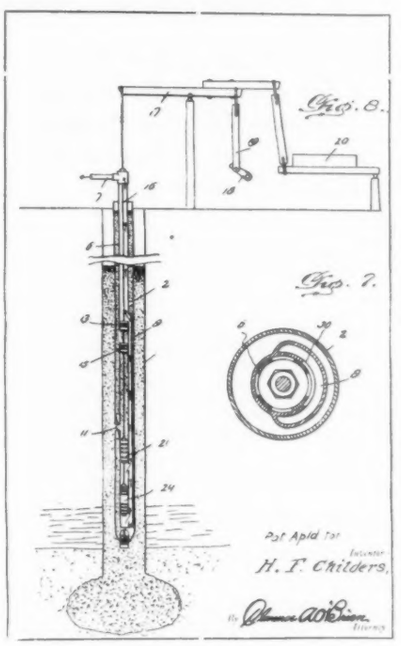
Oil Discharges Through Ports

In this position, with the continued upstroke of the piston (24), the oil is discharged through the ports into the bypass (8) and in the meantime, additional oil is sucked in after the piston (24) through the communicating intake ports (33) and (38) as well as permitting the flow of oil to fill the suction chamber (34) through the ball check valve (5.)

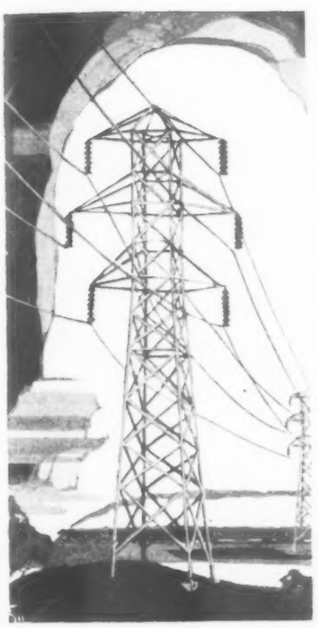
During the upstroke, the hydraulic lifting fluid between the pipe and the education tube (2) will act on the hydraulic piston (15) in the chamber (14) and the same will be counter-balanced by the counterweight (20) that is operatively associated with the beam of the pump power mechanism. In this manner, only the nec-







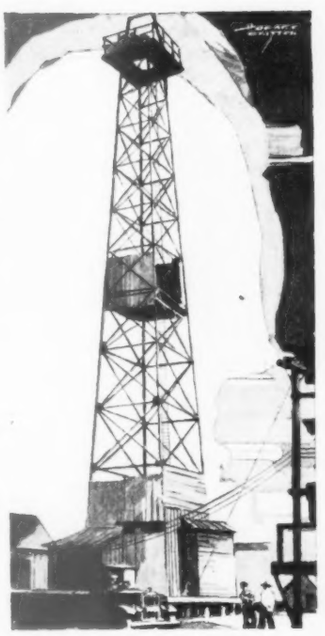
Brothers Under the Skin



Side by side, a transmission tower and an oil derrick. One is bright and shining, washed by the rains and dried by the sunshine. The other is black and grimy with its days of service. They are brothers under the skin; both deal with mighty forces.

• • •

The transmission tower carries in a day's time power equal to the man power of an army of one hundred thousand men. The oil derrick supports a string of tools . . . . steel pipe and drilling tools . . . . ofttimes more than a mile long.



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The two giants have an increasing respect and admiration for each other. Each is a symbol of a gigantic industry. Each is in the forefront of advanced progress. It is no wonder that working together they accomplish so much.

GULF STATES
UTILITIES COMPANY

General Offices

BEAUMONT, TEXAS LAKE CHARLES, LA.

essary power is applied to lift the fluid from the well. Further on the upstroke of the piston (24), fluid is admitted through the port (11) in the side of the hydraulic packer (9) and permitted to flow the hydraulic piston (15.)

As the piston (24) reaches the height of its stroke and starts downward, the same action takes place as before, and the check valve (5) holds the oil in the suction chamber (34) until the piston builds up sufficient pressure inside the sliding cylinder to move the same until the plug (27) strikes the lower closed end of the education tube and when in such position the discharge port of the upper end of the cylinder and adjacent port of the pipe and tube will be closed, while intake ports will be opened, the lower discharge port being open and the adjacent intake port being closed.

The piston continues on its downward stroke, discharging the fluid through the by-pass (8) into the upper portion of the education tube through the port (39) located above the cup packer (13) and on out of the well through the discharge pipe (7.)

In the descent of the piston on the pumping stroke, the hydraulic lifting fluid functions and the counter weight is lifted outside of the well and the fluid between the pipe and induction tube is permitted to act against the hydraulic piston which has a larger area exposed to the hydraulic fluid than that which is exposed to the oil being forced out of the well by the piston. The hydraulic piston (15) in turn actuates the pump and the movement of the piston (24) effects the actuation of the communicating intake and outlet port in the manner above described. The openings (28) and (29) provide means for releasing the air at the respective ends of the cylinders during the movement in the eduction type.

The port (11) acts as a release to the space below the hydraulic piston (15) to allow it to move up and down; and if any liquid escapes past the piston (15), it cannot cause any back pressure, but is relieved through the port (11.)

In the accompanying drawings and to which references are made: Figure 1 is a fragmentary vertical sectional view through the intermediate portion of the cylindrical pipe and eduction tube showing the hydraulic piston and the piston rod and the packer member.

Figure 2 is a similar section through the lower portion of the oil pipe and eduction tube showing the position of the sliding cylinder and piston in the oppermost positions.

Figure 3 is a cross sectional view taken approximately on the line 3—3 of Figure 1.

Figure 4 is a similar section taken on the line 4—4, Figure 1.

Figure 5 is a cross sectional view, taken approximately on the line 5—5, Figure 2.

Figure 6 is a cross sectional view, taken approximately on the line 6—6, Figure 1.

Figure 7 is a cross sectional view, taken approximately on the line 7—7, Figure 2.

Figure 8 is a diagrammatic view of the deep well pumping apparatus.

Machine Washes Samples Better and More Quickly Than Hand

JOHN E. VAN DALL, Oklahoma City district geologist for the Sinclair Oil & Gas Company, has invented a sample washing machine to alleviate the tasks of geologists who handle cuttings from sub-surface formations. It has proven a boon to those in geological departments, whose duties it is to cleanse the samples before putting them under the microscope.

The Van Dall samplewasher is an innovation in sub-surface geological work,

JOHN E. VAN DALL

and is designed to perform the necessary task of cleaning well cuttings for examination, both faster and more thoroughly, than can ever be done by hand labor.

The machine consists essentially of a tank in which a "paddle" rotating on a horizontal axis carries the samples (in individual containers) through water, and agitates them at the same time. The "paddle" is a frame work of iron rods and is turned by an electric motor, at the rate of about 24 r.p.m "The water level in the tank is kept at a point coinciding with the axis of the paddle by means of an overflow, while the water itself is being constantly renewed through the operation.

The containers used are in the shape of small boxes with sheet copped sides and brass wire mesh (screen) bottoms and lids. Sixteen of these containers are placed in the paddle and secured by an iron framework "lid" fastened to the paddle with thumbscrews. Two to three minutes washing time will thoroughly cleanse a set of 16 average samples and five minutes is ample time to wash the worst cuttings obtainable. Contamination of the samples is impossible, as there is generous clearance between the bottom of the tank and the edge of the paddle wh the latter is in motion. Thus the hea mud accumulates in the bottom of th tank, (where it is not stirred up) and c be removed occasionally with a sco while the very fine suspended particl pass off through the overflow.

Screens of different mesh are used in making the containers. For washing cabl tool samples, which are often ground t fine sizes, 60 mesh screens are desirable in order to preserve minute fossil form which are useful in microscopic examina tion. For rotary samples, 30 mesh screens are more commonly used, since the fragments are generally of a larger size However, any size screen that is desired by the individual geologist can be used and it is advisable to have several sets of containers of different mesh sizes in the laboratory, depending on the type and volume of samples to be handled.

After washing, the containers are placed in a handy portable rack which can be put into an oven or some other suitable drying device that does not expose the screens to a direct flame.

These machines are in use by the Gypsy Oil Company at Seminole; Indian Territory Illuminating Oil Company, Seminole and Oklahoma City; Magnolia Petroleum Company at Wewoka; Sinclair Oil & Gas Company at Oklahoma City; Shell Petroleum Corporation at Oklahoma City; Ramsey Petroleum Corporation at Oklahoma City; and the Canadian Government at Calgary, Alberta, and Tidal Oil Company has one in its Tulsa office.

Dall Sample Worker

California Gas Waste Injunction Not Yet Fully Effective

Success at Santa Fe Springs delayed by inability to agree on most equitable means of application and some opposition

By BRAD MILLS
Staff Representative

LOS ANGELES.—Enforcement of the temporary injunction to stop gas waste at Santa Fe Springs has been fairly effective, but failure to agree upon the most equitable means of application, and the tendency of a few companies to fight for modification have prevented a still greater reduction in this critical field. Production has dropped to about 129,000 barrels and the gas flow to around 400,000,000 cubic feet. The allowable gas production, which was the basis used by the court to stop gas waste, has been placed at about 300,000,000 cubic feet. This is somewhat higher than the original allowable total, the inclusion of several other operators as defendants having boosted the figures. Thus it is seen that if the allowable gas figure is met production will drop sharply from the present level.

Immediately after the temporary restraining order was issued by Superior Judge William Hazlett, it was found that several operators not included in the original complaint were applicable to the provisions of the injunction. They were immediately ordered to show cause why they should not be placed under the provisions of the order. When the original defendants were named, these small operators either had no production or were producing from the shallower sands and wasting no gas. In the meantime, their status changed sufficiently to cause them to be named as defendants and they have been restrained from the unreasonable waste of gas, along with the original defendants.

Operators who fought the injunction appeared before Judge Hazlett March 27, asking for a modification of the temporary restraining order. An attorney for one of these companies appeared and stated that it had been necessary to kill several wells in an effort to comply with the injunction. It was claimed that such a practice would undoubtedly reduce the production of such wells at such later date as they would be opened. The modification was denied.

Joseph Jensen, petroleum engineer for the Associated Oil Company, Ralph Arnold, geologist and engineer, and Frank O'Neil, petroleum engineer for Superior Oil Company, have been working with the court in an effort to work out an equitable application of the injunction. Jensen presented a plan which provided for the pooling of small leases, so that the small operator who may be forced to shut in his well or materially bean it back under the present arrangement may produce on a gas-oil ratio based on the several wells or leases. This plan elicited favorable comment, but it probably will be a difficult matter to induce the operator with a desirable gas-oil ratio to pool his interests with those with an undesirable ratio.

Wells high on the structure are producing less satisfactorily than the edge wells, but this fact penalizes the operator who seems most able to make the sacrifice. Major companies have killed several dozen troublesome wells to bring their allowable gas production down to the correct figure. It has been found that when wells are beaned back to produce a fraction of their maximum flow of oil, they often produce almost as much gas as when flowing wide open. This particularly true of large gas producers on top of the structure.

Judge Hazlett, who issued the temporary injunction, is using every means at his command to familiarize himself with conditions at Santa Fe Springs. It is believed that the court order will be changed to suit conditions on April 14, when adjustments are to be made.

Dr. Stanley Herold, geologist and expert on the action of oil and gas in reservoirs, testified March 27 in Judge Hazlett's court. The following is a part of his testimony:

Dr. Herold Testifies

"In the injunction proceedings against operators of oil and gas wells it is admitted by the state, through its representatives as attorneys and others, that the purpose behind any and all action be one of justice equally distributed to all such operators without regard to size of property holdings and amount of capital invested in this field and elsewhere. Such justice is, of course, impossible unless the demands of the injunction are in full accord with the laws of nature. She controls the situation within the productive zones at Santa Fe Springs as well as everywhere else. In the words of Horace, 'Drive out Nature with a pitchfork; she will come back every time.' As to these laws of Nature, many of us hold diverse opinions. I can do no more than to offer my ideas for your consideration along with those of others. Let me state them as concisely as possible:

"(1) Each productive zone in the Santa Fe Springs is a reservoir in itself; that is to say, each has its own identity apart from every other zone, regardless of the fact that any well, provided it is properly located, may be caused to produce from any one of them in succession on deepening.

"(2) Nature has already established for us the gas-oil ratio in each zone separately.

"(3) We may exercise a temporary control over such gas-oil ratios, but we cannot alter the total ultimate yield of gas with respect to the total ultimate yield of oil. The fluids within the pools initially are exactly the fluids to be produced entirely by the time of depletion.

"(4) If the gas-oil ratio is lowered at one well or group of wells, either the detained gas will be produced ater by the same wel or wells, or by another well or group of wells.

"(5) Gas detained at wells on the flank of the structure will slip up the dip toward the crest of the structure.

"(6) Wells at the crest of the structure must produce with a greater gas-oil ratio than those down the flank.

"(7) In the absence of wells on the crest of the structure, a large bubble of gas accumulates at such crest. This bubble is one which occupies at most 80 per cent of the pore space in the productive formation; oil occupies the remaining 20 per cent.

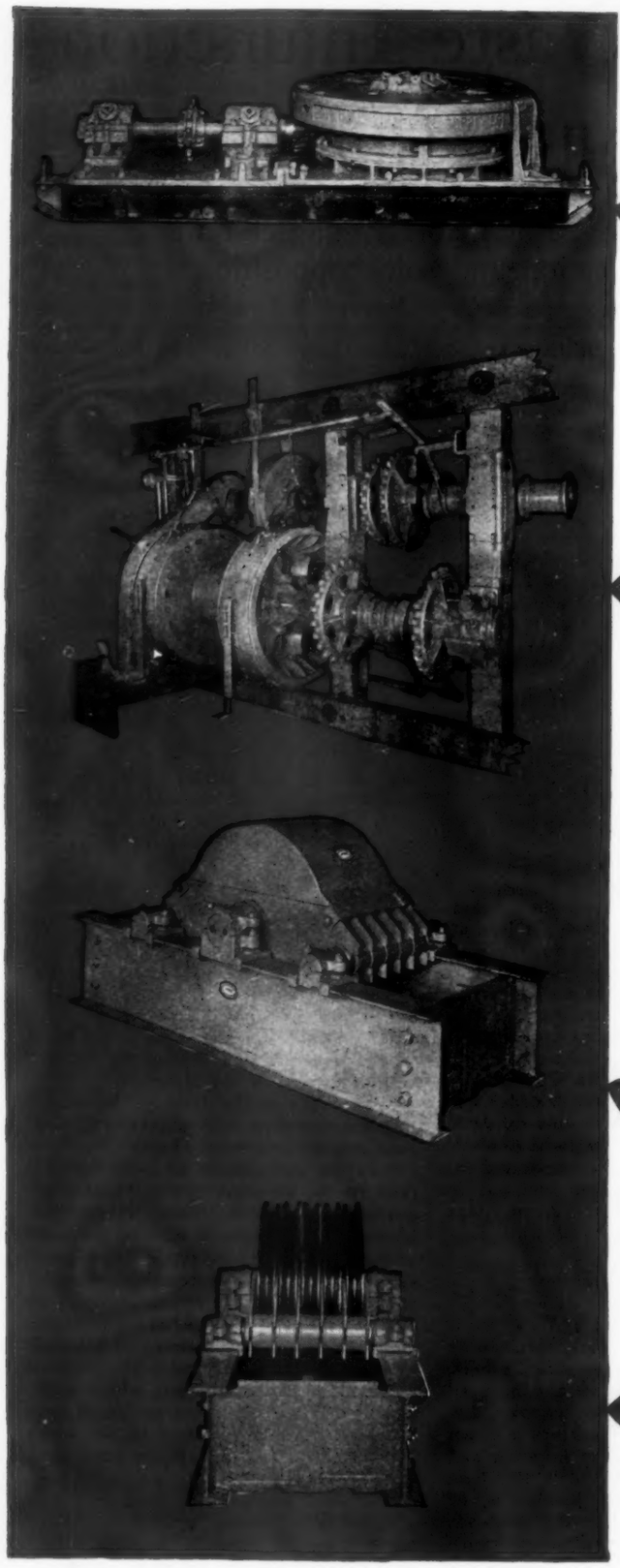
"(8) Final depletion of the pools means the entire replacement of oil and gas by encroached edgewater.

"(9) The compressed gas within each pool is the source of energy which delivers the oil to the bottom of the well, from all directions radially outward, for a short period of time known as the period of flush production.

"(10) Water under hydrostatic head, transmitting its pressure through edgewater surrounding the pools is the source of energy throughout the remaining life of the wells on settled production.

"(11) The amount of gas in each pool determines the rate and the amount of flush oil production.

(Continued on page 72)



IDECO-
Greyhound Products

The Rotary

The Ideco-Boykin Rotary will do everything any straight rotary will do and *in addition* give you the make and break feature *plus* the fishing job feature. With this last named feature you can come out of the hole without twisting or rotating the pipe.
The Ideco-Boykin Rotary has an unusually fine oiling system—oil bath easily and completely drainable. Mud cannot get into the bearings to cause undue wear. Rotary table is built low to make it easy for driller to pull slips. Made in 19, 23 and 27 inch sizes.

The Draw Works

No draw-works are easier or safer to operate than the Ideco-Boykin. Clutches are shifted by foot, leaving the hands free. The large brake surface, air cooled, is so positive and easily controlled that a man can hold with one hand 6000 feet of pipe without effect. The big diameter of the spool makes for less wear on the wire line.
A remarkably fine oiling system, lubricating all working parts contributes to the ease of operation. The Ideco-Boykin Draw-Works runs smooth and runs fast yet is always under perfect control. The shafts, special analysis steel, are ground and polished. Chrome nickel, clutches and sprockets—heavy and substantial.
Made in two sizes—"Regular" for operations up to 4,000 feet and the "Big Texas" for deep well work.

The Crown Block

The Ideco-Boykin Straight Line Crown Blocks with Idecalloy or Manganese Steel Sheaves represent the latest development in heavy duty crown blocks. Running on American roller bearings, the large diameter sheaves save power and materially increase the speed of operations. Each sheave is individually lubricated by the Alemite pressure system.

The sheave assembly is adjustable after the block has been mounted on the derrick. With ease and assurance you get perfect alignment of lines with the center of hole.

Mounted on 18-inch galvanized structural steel frames.

The IDECO Straight Line, Heavy Duty Crown and Streamline Traveling Blocks made combination units unequaled for speed, power and economical operation.

In addition to a complete line of straight line crown blocks, IDECO also offers a line of staggered blocks with or without roller bearings made of cast iron Idecalloy or Manganese Steel, ranging from small pumping blocks to 7 and 8 sheave combination drilling blocks.

The International Derrick & Equipment Company

Columbus, Ohio Houston, Texas Los Angeles, Cal.

BOYKIN
Greyhound Products

The Traveling Block

No load is too heavy nor speed too fast for the Ideco-Boykin Roller Bearing Traveling Block. The Blocks are streamlined and of the over-balanced type, proportioned to prevent overturning or fouling of the lines. Heavy in weight to insure rapid decent in the derrick without load. Sheaves are equipped with American Heavy Duty roller bearings with individual Alemite grease connection to each bearing. 36" Manganese Steel Sheaves reduce the bend in the line and prolong wire line service. The lines being perfectly straight eliminate side drag and friction.

The Reduction Gear Unit

The heaviest oil field requirement can be successfully handled by the Ideco Geared Unit. Wherever power is required—drilling, reworking, pumping, pulling rods and tubing—this Ideco Geared Unit can be relied upon to transmit the necessary power quietly, economically and efficiently. Built with 100% overload capacity for starting and intermittent periods. Designed to transmit 96% to 97% of the power at full load. Simple and compact, the Ideco Geared Units are oil-tight, dirt-proof, free from vibration and noise, and are outstanding for their high mechanical efficiency.

Bull, Band, Calf Wheels

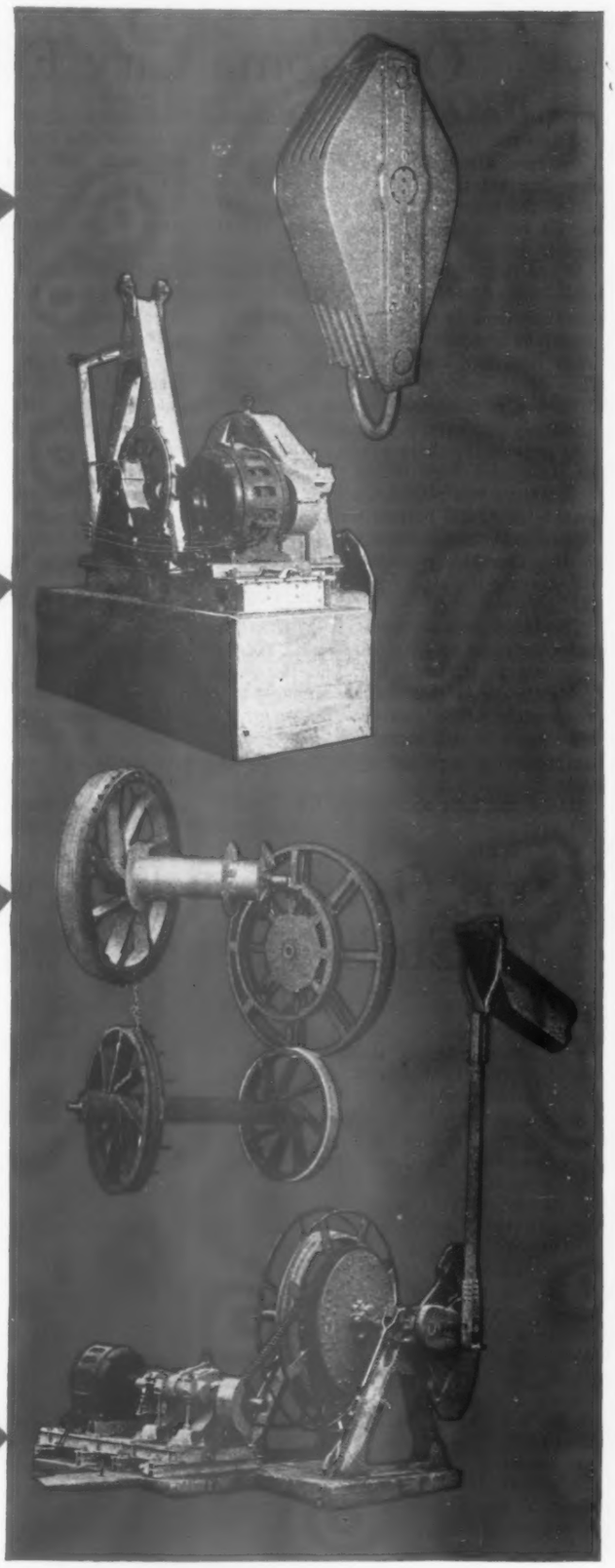
Ideco Wheels have been a standard item of equipment with the oil man for so long that they are generally accepted as the standard of reliability. Even so, as changed conditions warranted improvements, these changes have been made. For instance Ideco has developed a 24" Band Wheel which permits the use of a wider belt of thinner structure, creating longer belt life. Ideco Wheels conform throughout to A.P.I. specifications.

Chain Rig Pumping Units

The Ideco Chain Rig is a compact, powerful unit built entirely of steel and resembles in many respects the standard type of drilling or pumping rig. Ample strength, simplicity of design and unusual freedom from wear are outstanding features.

A complete IDECO Chain Driven Rig consists of a chain wheel; crank and shaft; standard "A" Frame jack posts with roller bearings; "A" frame Sampson and headache post; walking beam; pitman and long stroke crank counterbalance. Provision is made for installing a chain driven sand reel if desired. A single reduction geared unit is offered for use with any electric motor or high-speed gasoline engine; or jackshaft units are provided where gas or steam power is used.

This rig provides a portable, trouble-proof drilling or pumping unit that can be economically installed, operated and kept in continuous operation.



Plants: Columbus, Delaware, Ohio; Torrance, California; Beaumont, Houston, Texas. *District Offices:* New York City, N. Y.; Pittsburgh, Pennsylvania; Wichita, Kansas; Tulsa, Oklahoma; Shreveport, Louisiana; Ft. Worth, Beaumont, Texas; Maracaibo, Venezuela. *Warehouses and Stocks:* Columbus, Delaware, Ohio; Seminole, Tonkawa, Drumright, Okemah, Wewoka, Maud, Sasakwa, Allen, Oklahoma City, Oklahoma; El Dorado, Wichita Heights, McPherson, Kansas; Houston, Beaumont, Big Spring, Odessa, Pyote, Pampa, Borger, Mexia, Luling, Wichita Falls, Grand Saline, Seguin, Hebbronville, Texas; Lake Charles, Shreveport, Louisiana; Smackover, El Dorado, Arkansas; Bakersfield, Taft, Torrance, California.

Export Offices—74 Trinity Place, New York City; Columbus, Ohio; Houston, Texas; Los Angeles, California.

Pipe Line Increase Runs from Oklahoma City Field

TULSA.—Some relief for producers in the Oklahoma City field will be seen after April 3, at which time pipe line companies have agreed to increase the runs from the field to 102,000 barrels per day, as compared with 81,000 barrels daily at the present time.

While this figure could no doubt have been reached without any change in the proration ratio in the pool, operators have agreed to increase the per cent produced from 12½ per cent to 16 2/3 per cent. This slight increase will make but little difference in the actual amount of oil produced per property.

At present the daily average runs from the field have been totaling from 60,000 to 70,000 barrels per day, although an allowable of 81,000 barrels was given. An increased demand is expected to take care of the increase permitted, although it will increase the state's production by 20,000 barrels.

The field has a potential production figure of close to 1,000,000 barrels a day, according to students, however, the general estimate is that its potential is approximately 800,000 barrels. However, at this time it is still increasing rapidly and the producing area not defined in many spots.

Under the new agreement, the Prairie Pipe Line Company, Oklahoma Pipe Line Company and Empire Pipe Line Company will each take 20,000 barrels per day. Magnolia Petroleum Company will take 10,000 barrels, as will Tidal Oil Company, which handles its oil through the Magnolia lines. Shell Petroleum Corporation will handle 6000 barrels and Sinclair Pipe Line Company will take 15,000 barrels daily. Indian Territory Illuminating Oil Company can handle 5000 barrels daily through tank cars.

Total pipe line capacity of the field is approximately 140,000 barrels per day, while 50,000 barrels can be handled by tank cars, if not more. Purchasers are still unwilling to increase their purchases of oil at Oklahoma City, due to general conditions, despite the fact that refiners are anxious for the Oklahoma City oil because of its high gasoline and lubricating contents.

Under the plans for increasing the allowable production from 12½ to 16 2/3 per cent the wells will remain in eight classifications under the time program plan employed at Oklahoma City, but each well will be permitted to produce 48 hours instead of 36 hours. Class A wells will produce from 7 a.m., April 3, to the same hour April 5; after which Class B and succeeding classes will take their turns.

Texas Operators Renew Efforts to Curb Crude Production

DALLAS.—Renewed efforts are to be made by the conservation committee of Texas operators towards the curbing of unnecessary drilling in the state as a means of bringing about a balance between crude production and demand. Members of the committee held an executive session here March 28 to launch their new drive, and will be aided in the work through the appointment of sub-committees in each of the important oil producing areas of the state. This committee consists of 31 independent operators and representatives of major companies, with J. D. Collett, Fort Worth operator, chairman, and R. R. Penn, president Penn Oil Company, Dallas, vice-chairman, and was appointed by the Texas division of the Mid-Continent Oil & Gas Association late last January. The meeting was held in the offices of Edward T. Moore, president of the Simms Oil Company and president of the Texas division.

A slight improvement in general crude market conditions in the state is in evidence, according to those attending the meeting, and a reasonable amount of curtailment in threatening areas, such as the Gray County section of the Texas Panhandle and the Refugio field, will provide the desired turning point. The latter two areas have been tagged as the most likely threats for substantial production increases because of the volume of drilling taking place on leases known to be capable of producing oil in flush quantities. Gray County and Refugio have no drilling or production restrictions of an organized nature, although a few operators in each area are not fully protected with market outlets that permit maximum production of flush wells.

The general committee plans to avoid a policy of fixed agreements among operators as to the volume of drilling to be conducted, or amount of oil to be produced daily, but will endeavor to interest lease owners in holding down unnecessary drilling voluntarily. The sub-committeemen now being picked for each district are to lend a hand in obtaining co-operation of operators along such lines.

The Judkins field, West Texas, was discussed at length by the general committee, owing to the fact that about 30 tests are underway on virtually proven locations. Testimony was offered that a ready market is available for the entire output of the wells approaching completion, and that most of the flowing wells are to be tubed upon completion to conserve the gas pressure on the field. Operators in the Judkins field are spacing locations so as to drill a maximum of only six wells to each 80-acres, although the initial development is largely confined to a double row of locations extending north and south across the producing area. The proposed maintenance of a balanced gas-oil ratio throughout the field is expected to materially curb the flush oil output. Current production is being marketed through the lines of the Burford Oil Company, Gulf Pipe Line Company, Magnolia Pipe Line Company and Humble Pipe Line Company, while Shell Pipe Line Company and The Texas Pipe Line Company are soon to invade the field.

After summarizing all important oil producing districts in Texas the general committee found that further curbing of production from completed wells is a hopeless task, and that surest results will be scored by selling operators on the idea of holding back unnecessary wildcat development work as well as drilling in established producing areas.

Oklahoma Curtailment Order Extended From April 1

Tulsa. — The Oklahoma Corporation Commission has ordered the continuance for another 90 days after April 1 of the proration program on crude oil in the state. The order contains virtually the same provisions as that issued during the previous proration period, and practically coincides with the agreement reached by oil operators at a meeting here a week beforehand.

The principal change was made in the Oklahoma City field, the largest field in the state, which was ordered curtailed to 75 per cent. However, operators of this field later agreed among themselves that they would not produce more than 16 2/3 per cent, or in other words, curtail 8 1/3 per cent.

Only Wirt Franklin, president of the Independent Petroleum Association of America, and Ray M. Collins, corporation commission umpire, were witnesses. They asserted that the potential production of the state was far in excess of market demand.

The average daily market demand for oil produced in Oklahoma is estimated at slightly in excess of 600,000 barrels daily for the next three months while the potential daily production was estimated at 1,488,100 barrels for April; 1,715,400 barrels for May, and 1,869,700 barrels for June.

Fort Worth.—Construction work is being started by the Magnolia Petroleum Company on a 32-mile three-inch welded line from its two refineries in Fort Worth to Dallas. This line will be used in making pipe line deliveries of commercial gasoline to the latter city for local distribution. Work is well underway on a 60-mile three-inch welded gasoline line from the company's Luling refinery to San Antonio and intermediate points.

"Tico" Gas Engines Have Timken-Equipped Crank Shafts

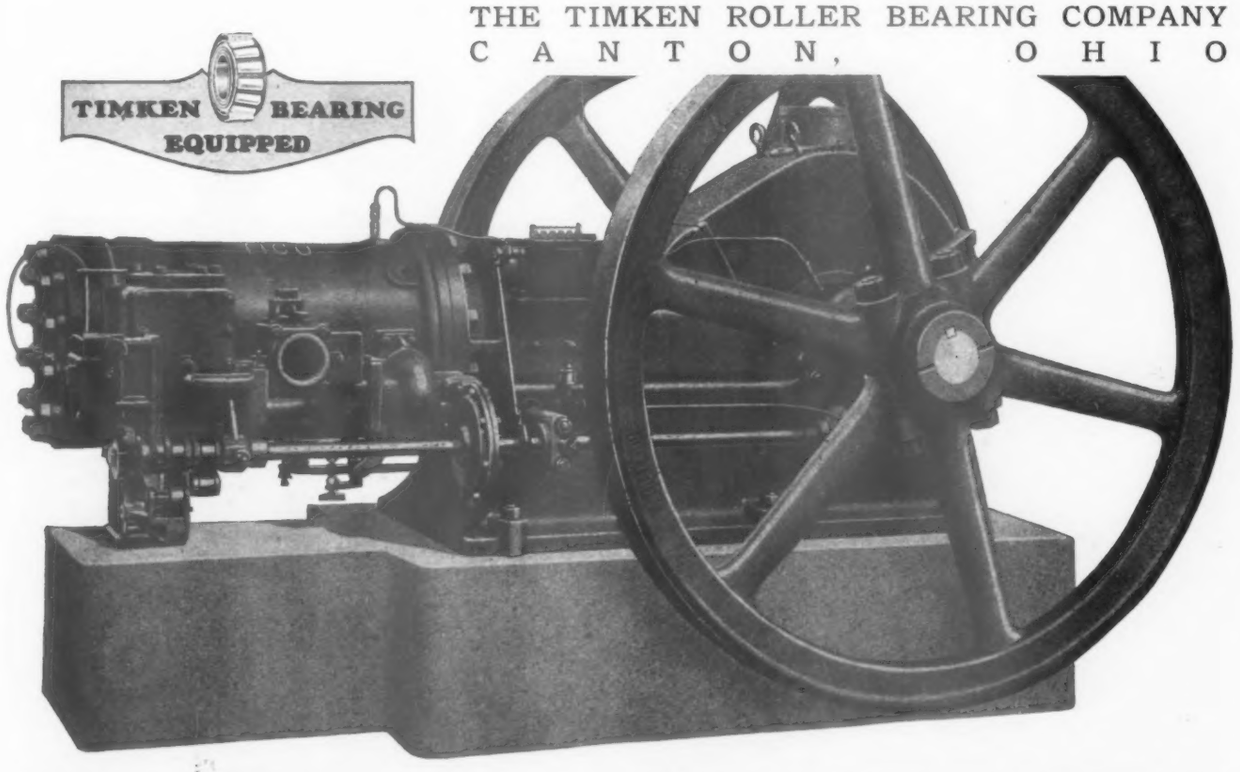
Everything else being equal, the question of efficiency and continuity in gas engine performance centers on the crank shaft.

In order that the power generated within the cylinder may be transmitted to the point of application continuously with minimum loss, friction must be reduced and the crank shaft protected against torsional strain, radial, thrust and combined loads and misalignment.

The Tico 4-cycle 40 H.P. gas engine manufactured by the Titusville Iron Works Company, Titusville, Pa., is a good example of the improved performance, dependability, operating and maintenance savings, resulting from the exclusive combination of Timken tapered construction, Timken *POSITIVELY ALIGNED ROLLS* and Timken-made steel.

In oil field equipment of all types, the same group of Timken advantages is aiding oil producers to cut costs in every department of production.

THE TIMKEN ROLLER BEARING COMPANY
C A N T O N, O H I O



TIMKEN *Tapered Roller* **BEARINGS**

306 feet in 3½ hours with an H.C.SMITH Type "G" demountable DRILLING BIT in the Oklahoma City field

SOME exceptional records have been made by the H. C. Smith Type "G" Demountable Drilling Bit since its introduction in the Oklahoma City oil field. A number of records in comparative test runs have been remarkable.

The record of 306 feet in 3½ hours referred to above was made in the Jones No. 1 well of the I. T. I. Oil Company, Oklahoma City, Oklahoma, through packed water sand and shale.

The illustration below shows the bit (on rotary table) that made the run, also a new bit ready to be substituted for the old one—a change requiring but a few moments.

Although the bit is worn down, it will be noted that the hole was maintained to gauge during the entire run due to the fact that the reaming blades of the worn bit are not worn under gauge.

Write us for catalog No. 31 containing additional records of performance and complete information regarding this hole-making tool.

H. C. SMITH MANUFACTURING CO., INC.
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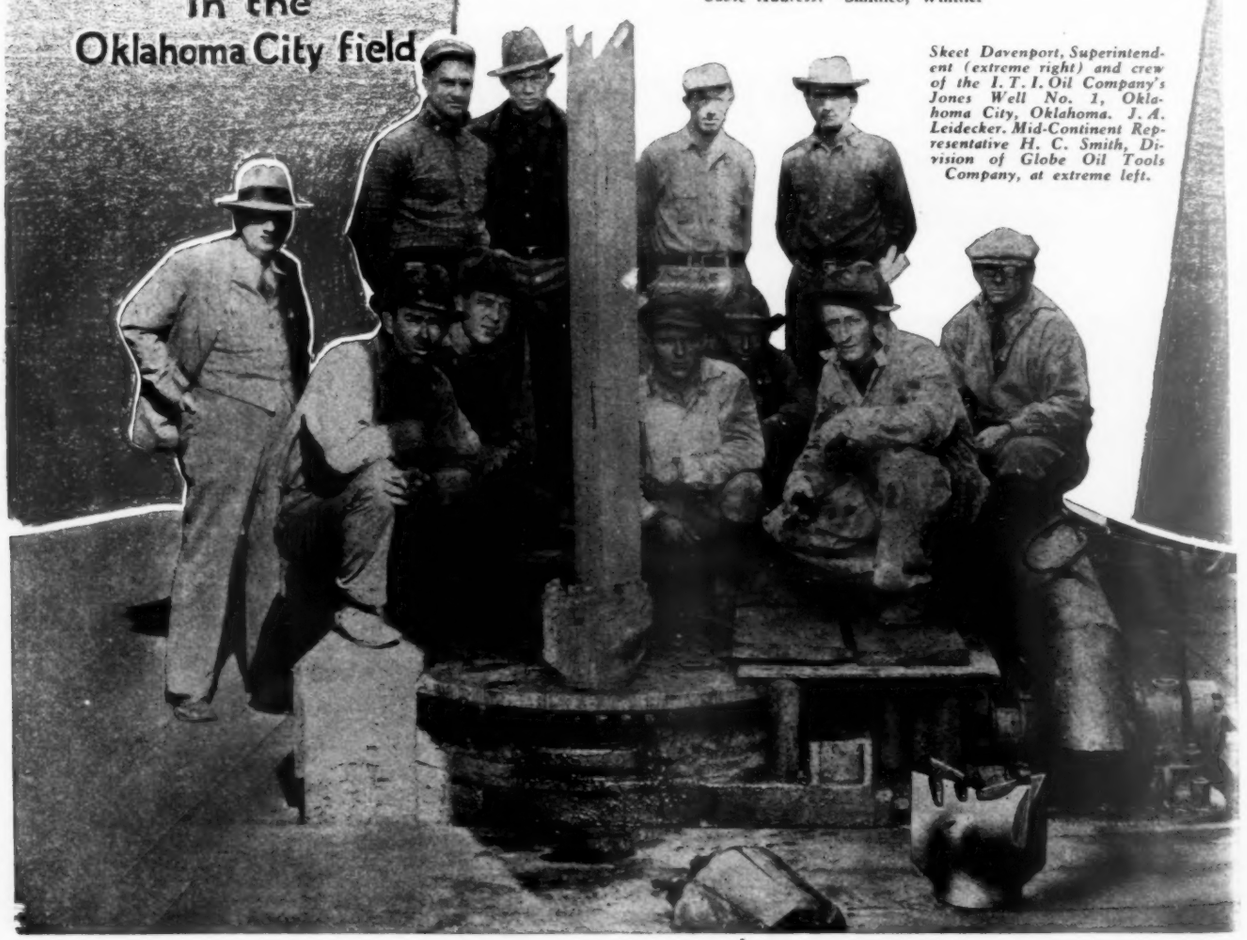


Skeet Davenport, Superintendent (extreme right) and crew of the I. T. I. Oil Company's Jones Well No. 1, Oklahoma City, Oklahoma. J. A. Leidecker, Mid-Continent Representative H. C. Smith, Division of Globe Oil Tools Company, at extreme left.

Markets--Production--Crude Prices

H. J. STRUTH, *Staff Economist, Houston, Texas*

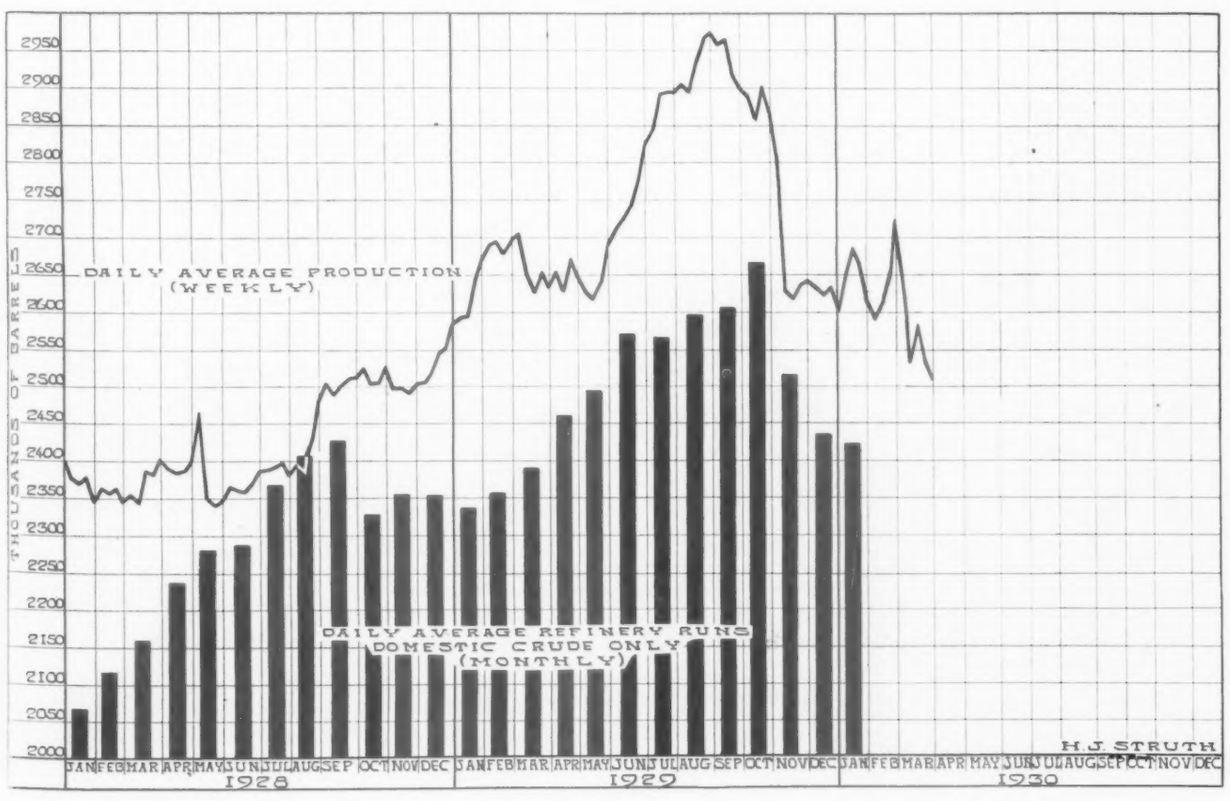
California and Oklahoma Production Below Current Requirements

ANOTHER decline last week of 21,700 barrels brought the national production of crude to the lowest point since December, 1928. At the current rate of demand, this indicates a current production excess of only 80,000 barrels daily. Analysis of necessary versus actual production by states reveals that California and Oklahoma have succeeded in reducing production to a point somewhat below necessary requirements. This is perhaps the most optimistic outlook that has prevailed in the petroleum industry for many a day and strikingly illustrates the remarkable progress that has been made in the direction of sound conservation and economic stability.

While the current situation reveals decided improvement, the industry must not overlook the fact that the cumulative daily average production since the first of the year is actually 2,609,765 barrels, whereas the normal rate for the first quarter of this year is placed at 2,434,000 barrels, indicating an excess of 175,765 barrels daily. Nevertheless, since the normal rate for the succeeding quarter must be taxed by the quantity of excess accumulated during the first quarter of the year, it is apparent that the current rate of production will compare most favorably with the normal quota for the next three months. Under this condition, it is readily seen that the situation is rapidly clarifying and any further effort in the direction of curtailment cannot fail to result in a true state of equilibrium.

Operators in Texas continue to feel that they are doing their part in curtailing over-production, but the fact remains that this state is almost solely responsible for the indicated excess production of the United States. Final details on normal production by states are not available at this time, but a preliminary check indicates that Texas is still over-producing to the extent of about 100,000 barrels daily. California and Oklahoma, instead of showing an excess are now credited with producing less than normal requirements. However, it is noticed that Texas pro-

DOMESTIC PRODUCTION AND REFINERY RUNS



ducers are finding a ready market for their oil at present prices, a part of which is undoubtedly being consumed at an excessive rate by refineries, while the balance is accumulating in storage. In judging current demand in comparison with present production many operators are entirely disregarding the fact that a large quantity of excessively produced oil has already been added to burdensome stocks. It must, therefore be apparent that current production must be proportionately curtailed in order to bring the situation into a reasonable balance. Just because last week's production equals current requirements does not signify that the industry has been entirely cured of its over-production ills. As a matter of fact, past excesses can only be eliminated by curtailing production below the indicated rate of demand. In the final analysis, Texas operators will find that the course of posted prices depends entirely upon the condition of the above-ground supply, and until that supply is reduced there is little liklihood of increased oil prices in Texas.

Texas Refining

Another situation that demands immediate attention in Texas is the lack of concerted effort to reduce refinery runs. The figures of the American Petroleum Institute show that refinery crude runs in Texas continue at a high rate, which is presumably prompted by the fact that gasoline has been in good demand. As in the case of the producer, the refiner fails to consider the excesses of the past, with the result that the supply of refined products is being reduced at a much slower rate than if production were reduced in proportion to the unnecessary accumulation of the past few months. This also applies to the refineries of the Eastern States, where the demand for crude is apparently being maintained at an artificial rate. Little has been done, so far, in the direction of still run curtailment by refiners, but the movement seems to be gaining some momentum and it is believed that the producer must soon consider the effect of at least a partial slackening in demand for crude by the refiners.

Production in California has dropped to 612,000 barrels and is less than 10,000 barrels above the new allowable of 603,289 barrels.

Production in Group 1, which includes all of the settled fields is less than the allowable. The new allowable for Santa Fe Springs is 119,085 barrels and for Long Beach 95,140 barrels. New potentials for these fields are 280,921 barrels and 160,912 barrels, respectively.

California and Texas, outside of Gulf Coast, led the decline in production last week, showing decreases of 16,550 barrels and 18,300 barrels, respectively. The decline in Texas was, however, offset to a great extent by a sharp gain of 11,100 barrels in the Gulf Coast area. The Yates pool, in West Texas, was further curtailed by 12,100 barrels as a result of decreased runs by the Humble Oil & Refining Company. In California, as indicated by last week's report, production of the Santa Fe Springs field was curtailed an additional 17,400 barrels. Oklahoma showed practically no change over the previous week, with a decline of only 1200 barrels. The bringing in of additional large wells in the Oklahoma City field resulted in a gain of 9850 barrels, offsetting declines in the Greater Seminole area.

Following are the changes in production reported by the American Petroleum Institute for the week ending March 29:

		Barrels
Gray County	Decrease	3,200
Ector County	Decrease	1,000
Crane-Upton Counties	Increase	1,200
Howard County	Increase	1,200
Yates	Decrease	12,100
Winkler County	Decrease	1,750
Refugio County	Increase	4,750
Esperson Dome	(New)	4,550
Bowlegs	Decrease	2,250
Searight	Increase	2,250
East Little River	Decrease	4,300
Earlsboro	Decrease	2,300
East Earlsboro	Decrease	5,750
St. Louis	Decrease	1,200
Mission	Decrease	1,700
Oklahoma City	Increase	9,850
Sasakwa	Increase	1,300
Santa Fe Springs	Decrease	17,400
Long Beach	Decrease	1,700
Midway-Sunset	Increase	2,000
Ventura	Decrease	1,400
Voshel	Decrease	1,000
Lake Barre	(New)	1,850

Price Advance Rumored

Rumors continue to be heard in Oklahoma to the effect that a crude price boost is imminent in the near future. The facts show that stocks are actually being drawn upon in Oklahoma, which lends credence to the possibility of materialization of such rumors at an early date. What effect this will have upon the situation in Texas is problematical, although there is liklihood that North and Central Texas prices would be effected by such a move. If the impending price boost is to become general throughout the Mid-Continent area, it is obvious that Texas operators will have to do some fast curtailment work during the next few weeks.

California

Mixed conditions exist in California, with crude production going down and conditions improving on one hand, and with the gasoline situation being anything but satisfactory on the other. All news was favorable for a short period, but the retail marketing of gasoline in Southern California has become distinctly a disturbing factor.

The connection between crude production and the marketing of gasoline has become so close that often a move to correct one phase is started with the other. The overproduction of nearly 18 months' duration was reflected in huge stocks of refinable crude. This, in turn, affected refinery runs, with gasoline being both the balancing and disturbing factor

CRUDE RUNS TO STILLS, GASOLINE AND GAS AND FUEL OIL STOCKS, WEEK ENDING MARCH 22, 1930

(Figures in barrels of 42 gallons)

District—	Potential Daily Capacity	Potential Capacity Reporting Total	Potential Capacity Reporting Per Cent	Crude Runs to Stills Total	Crude Runs to Stills Daily Average	Crude Runs to Stills Per Cent Operated	Gasoline Stocks	Gas & Fuel Oil Stocks
East Coast	605,700	605,700	100.0	3,097,100	442,400	73.0	9,266,000	6,462,000
Appalachian	128,100	116,600	91.0	565,300	80,800	69.3	1,828,000	657,000
Indiana, Illinois, Kentucky	360,000	358,000	99.4	2,147,600	306,800	85.7	8,202,000	3,024,000
Oklahoma, Kansas, Missouri	462,200	411,700	89.1	2,087,600	298,200	72.4	4,583,000	3,509,000
Texas	788,000	712,700	90.4	4,217,400	602,500	84.5	7,698,000	11,549,000
Louisiana-Arkansas	270,600	262,000	96.8	1,189,000	169,900	64.8	2,522,000	2,064,000
Rocky Mountain	148,900	139,300	93.6	413,800	59,100	42.4	3,109,000	1,052,000
California	897,400	891,400	99.3	4,026,600	575,200	64.5	16,622,000	108,936,000
Total Week March 22	3,660,900	3,497,400	95.5	17,744,400	2,534,900	72.5	53,830,000	137,253,000
Total Week March 15	3,660,900	3,494,400	95.5	*17,781,900	2,540,200	72.7	53,986,000	137,134,000
The Texas and Louisiana Gulf Coastal Figures Shown Below are Included Above in the Totals of Their Respective Districts.								
Texas Gulf Coast	526,500	523,500	99.4	3,176,900	453,800	86.7	6,520,000	8,917,000
Louisiana Gulf Coast	147,500	147,500	100.0	756,900	108,100	73.3	2,163,000	1,222,000

*Revised due to receipt of information from an East Coast company that they had overstated their runs for the week ending the 15th by 96,400 barrels.

FIELD STATISTICS OF IMPORTANT DISTRICTS

Pool—	Oil Wells Completed	Total Initial Production	Initial Per Well	Number Producing Wells	Daily Production Barrels	Daily Prod. Per Well	Rigs Up	Wells Drilling
WEST TEXAS:								
Hendrick	621	3,117,155	5,028	564	87,825	156	..	2
Church & Fields	217	215,920	994	209	21,615	103	..	2
Gulf-McElroy	85	62,055	730	83	14,235	172	..	2
Yates	378	2,509,135	6,638	365	130,605	358	4	9
TEXAS PANHANDLE:								
Gray County	553	407,775	724	538	56,640	105	23	55
OKLAHOMA:								
Oklahoma City[1]	124	1,181,012	9,524	30	69,172	2,306	37	160
CALIFORNIA:								
Santa Fe Springs[2]	575	1,626,400	2,828	275	122,000	443	9	70

[1]Oklahoma City actually has 154 completed oil producers, but only 24 officially completed by scout tickets. Under proration plan only small percent of producers are allowed to flow each day as shown by number of producing wells.

[2]Includes deep zone production only. For field total add 70 wells and 9500 bbls.

at different times. The almost sudden reduction of production apparently remedied the situation, but it has developed that some of the light crude stored is being converted into gasoline to be marketed at less than standard posted prices.

The surplus of gasoline in California is finding an outlet through cut-price dealers. The practice became so general that major marketers have reduced the service station price three cents to meet the competition. The net result is a miniature price war, with gasoline retailing at from 12½ cents to 16½ cents in the Los Angeles district. Surplus gasoline had been controlled fairly well for more than a year, but when support was withdrawn the market drifted downward.

State production has dropped to around 640,000 barrels and seems headed for still lower levels. Several fields have reached their allowables, Santa Fe Springs having fallen to about 130,000 barrels. The injunction restraining operators from wasting gas has been effective in this field and there is little likelihood that it will remain a critical factor much longer. The natural decline is rapid and it is doubtful whether the field could produce more than 200,000 barrels if allowed to flow at a maximum rate.

Long Beach remains a stubborn field, production averaging considerably above the allowable. Several good wells have been completed and this, plus the fact that a few operators are handicapped in their efforts to meet their allowables, has kept the total well above 100,000 barrels.

Movement of California gasoline to the Atlantic seaboard has been considerably smaller than early estimates indicated, the present year showing signs of not exceeding 1929 in total shipments. Refinery runs in California and the Eastern demands will be the guide for movements through the Panama Canal.

A firmer tone has developed lately in crude and refined oil markets of Texas. Crude purchasing companies are displaying more interest in booking new connections, while storage oil is again in demand at current prices. The upward trend of gasoline prices has followed in the wake of early spring buying conducted by domestic jobbers and exporters.

North Texas refiners report a favorable movement of gasoline, and average sales of the U. S. Motor gasoline are three-quarters to one cent per gallon higher than those prevailing in January. These plant owners are inticipating a crude price advance, and are demanding one-quarter to one-half cent per gallon more for gasoline selling for delivery during the last half of April.

Evidence of improved crude market conditions is offered by major crude purchasers invading new areas to enhance their crude supplies. Humble Oil & Refining Company is taking the initiative on this movement, having announced that an eight-inch line will be built from its West Texas system to the Hobbs field, New Mexico. The company is now taking oil in the Judkins field, West Texas, and the Refugio field, Southwest Texas. The latter field has had a disturbing influence in crude market circles because of comparatively low crude prices prevailing. However, Humble Oil & Refining Company posted a substantial price boost for the popular low grades of oil produced in the field early this week.

Atlantic Pipe Line Company is extending its West Texas system to the Hobbs field to purchase oil. Extension of Magnolia Pipe Line Company's North Texas system into Wilbarger County has resulted in Magnolia Petroleum Company's offer to purchase oil from producers heretofore not adequately served with a market outlet. This company made connection early this week with a portion of Cosden Oil Company's properties, which have been prorated by another major purchaser.

IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

(Barrels of 42 gallons)

	Week Ended March 22	Week Ended March 15
AT ATLANTIC COAST PORTS—		
Baltimore	115,000	80,000
Boston	.....	59,000
New York	722,000	1,111,000
Philadelphia	95,000	487,000
Others	249,000	216,000
Total	1,181,000	1,953,000
Daily Average	168,714	279,000
AT GULF COAST PORTS—		
Galveston District	.....	.....
New Orleans & Baton Rouge	15,000	* 76,000
Port Arthur and Sabine District	.....	.....
Tampa	40,000	35,000
Total	55,000	111,000
Daily Averages	7,857	15,857
AT ALL UNITED STATES PORTS—		
Total	1,236,000	2,064,000
Daily Average	176,571	294,857
Daily Average Four Weeks Ended	257,893	298,178
DISTRIBUTION OF TOTAL IMPORTS IS AS FOLLOWS:		
Crude	694,000	* 1,326,000
Gasoline	32,000	323,000
Fuel Oil	510,000	415,000
Total	1,236,000	2,064,000

*—Revised.

CALIFORNIA OIL RECEIPTS AT ATLANTIC AND GULF COAST PORTS

(Barrels of 42 gallons)

	Week Ended March 22	Week Ended March 15
AT ATLANTIC COAST PORTS—		
Baltimore	15,000	16,000
Boston	.....	.....
New York	356,000	186,000
Philadelphia	66,000	181,000
Others	74,000	157,000
Total	511,000	540,000
Daily Average	73,000	77,143
AT GULF COAST PORTS—		
Total	.....	25,000
Daily Average	.....	3,571
AT ATLANTIC AND GULF COAST PORTS—		
Total	511,000	565,000
Daily Average	73,000	80,714
Daily Average Four Weeks Ended	56,179	45,500
Distribution of Total California Oil Receipts is as follows:		
Gasoline	360,000	470,000
Gas Oil	62,000	74,000
Fuel Oil	74,000	.....
Kerosene Distillate	15,000	.....
Lubricants	.....	21,000
Total	511,000	565,000

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TODAY, scarcely a foot of steel pipe goes into the ground unless it is protected in some manner against corrosion. Stretching over the country in every direction are thousands of miles of pipe lines that have been covered with Biturine as armor against acids, alkalis and moisture. These thousands of miles of pipe lines are covered with Biturine because it has proved through years of effective service and competitive tests its ability to give practically 100% service under all conditions of soil and climate.

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Biturine Coupling Solution
Biturine Solution No. 5 — Biturine 70-30
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United States Daily Average Production

Figures below are taken from the complete revised estimates of the AMERICAN PETROLEUM INSTITUTE except for the current week, which are advance estimates issued by the A. P. I. and are subject to revision:

1929	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Av.	United States Total
January	722,550	97,150	632,500	136,750	36,650	78,600	111,950	73,200	747,250	2,635,600	81,703,600
February	714,800	95,950	643,350	142,300	35,700	74,600	108,550	71,750	797,800	2,684,800	75,204,400
March	666,500	95,500	662,500	147,750	35,800	74,250	108,850	70,400	786,000	2,647,400	82,068,350
April	665,600	106,400	650,100	154,550	35,550	72,900	110,850	69,400	781,350	2,646,700	79,402,100
May	679,650	115,400	651,100	150,350	35,350	71,500	114,150	72,850	749,250	2,639,600	81,827,600
June	685,200	120,750	688,200	147,500	35,700	70,050	116,750	72,000	827,200	2,763,400	82,902,250
July	722,050	124,250	718,950	148,150	35,750	68,650	122,000	74,250	874,850	2,888,900	89,555,250
August	728,100	127,950	750,750	153,100	36,300	66,900	126,600	77,900	873,300	2,940,900	91,167,250
September	714,050	128,450	741,200	156,600	37,050	65,300	137,250	78,600	874,850	2,933,350	88,000,650
October	673,600	113,400	714,550	167,050	39,700	64,550	137,400	77,950	876,600	2,864,800	88,809,500
November	640,300	110,050	702,350	171,350	36,750	63,700	135,400	76,550	706,500	2,642,800	79,285,050
December	650,000	111,600	687,850	161,350	38,700	61,850	140,650	76,150	698,200	2,626,350	81,417,000
1930											
January	671,050	111,700	672,650	178,300	37,650	58,500	142,250	73,850	688,850	2,634,800	81,574,650
February	631,900	111,400	654,600	199,950	39,450	58,400	135,050	74,850	746,550	2,652,150	74,280,200
March 1	617,200	114,700	654,600	203,450	41,800	58,500	133,050	77,550	723,000	2,623,950	18,367,650
March 8	604,300	113,650	648,500	205,350	41,750	58,100	133,600	68,700	661,400	2,535,350	17,747,450
March 15	652,100	116,200	655,250	199,850	42,000	59,250	133,050	73,900	651,600	2,583,200	18,082,400
March 22	616,200	117,150	646,450	203,050	38,650	58,700	131,900	74,400	649,400	2,535,900	17,751,300
March 29	615,000	114,500	629,900	214,150	43,300	58,600	131,750	75,900	631,100	2,514,200	17,599,400
Increase	.....	.....	.....	11,100	4,650	.....	.....	1,500	.....	.....	.....
Decrease	1,200	2,650	16,550	.....	.....	100	150	.....	18,300	21,700	151,900

TEXAS
(Outside Gulf Coast)

PANHANDLE DISTRICT

	Mar 29	Mar 22
Carson County	9,850	9,300
Gray County	56,400	59,600
Hutchinson County	22,600	23,500
Wheeler County	450	550
Others	600	600
Total	89,900	93,550

NORTH TEXAS

Archer County	17,600	17,650
Burkburnett	8,100	8,100
Electra	11,300	11,400
Iowa Park-KMA	5,100	5,150
Montague and Cooke Counties	10,500	10,500
Wilbarger	25,850	25,950
Others	2,000	2,050
Total	80,450	80,800

WEST CENTRAL TEXAS

Brown County	7,750	7,800
Callahan County	3,700	3,700
Coleman County	4,800	4,900
Eastland-Desdemona	5,500	5,550
Jack County	4,100	4,100
Palo Pinto County	750	700
Shackleford County	6,600	6,600
Stephens County	5,850	5,850
Throckmorton County	900	850
Young County	9,800	9,900
Others	1,400	1,450
Total	51,150	51,300

WEST TEXAS

Ector	4,000	5,000
Crane-Upton Counties	46,400	45,200
Crockett County	2,200	2,000
Howard County	39,700	38,500
Jones County	2,100	2,100
Mitchell-Scurry Counties	2,300	2,100
Yates	113,900	126,000
Pecos County	5,600	5,700
Reagan County	16,700	16,700
Winkler County	86,250	88,000
Others	2,850	2,700
Total	322,000	334,000

EAST CENTRAL TEXAS

Boggy Creek	3,450	3,500
Corsicana-Powell	6,000	6,000
Currie	300	300
Mexia	4,100	4,150
Nigger Creek	200	200
Richland	250	250
Wortham	900	900
Van Zandt	10,200	9,900
Total	25,400	25,200

SOUTHWEST TEXAS

Darst Creek	15,500	15,500
Dale	300	300
Laredo District	8,600	8,700
Luling	10,000	10,100
Lytton Springs	900	900
Somerset	1,350	1,300
Salt Flat	22,150	22,500
Others	2,200	2,300
Total	61,000	61,600
T'tl Tex. (outside Gulf Coast)	629,900	646,450

TEXAS GULF COAST

Barbers Hill	27,800	27,800
Batson	1,200	1,200
Big Creek	2,700	2,900
Blue Ridge	1,800	1,900
Boling	1,000	1,000
Damon Mound	500	500
Goose Creek	5,000	4,900
Hull	9,100	8,700
Humble	19,100	19,200
Orange County	2,500	2,350
Pierce Junction	11,000	10,300
Refugio	43,950	39,200
Raccoon Bend	10,250	10,200
Saratoga	1,050	1,050
Sour Lake	2,250	2,250
South Liberty	5,200	5,150
Spindle Top	16,350	15,500
Sugar Land	10,150	10,600
West Columbia	6,050	6,000
Washington County	1,650	1,500
Fannett	1,300	1,450
Port Neches	2,300	2,200
North Dayton	800	1,000
Esperson Dome	4,550	.....
Others	6,100	7,100
Total	193,650	183,950
Texas Total	823,550	830,400

OKLAHOMA

Asher	2,250	2,400
Carr City	9,350	9,650
Logan County	8,450	9,000
Braman	3,500	3,550
Blackwell	3,350	3,350
Hubbard	1,600	1,600
Thomas	650	650
Tonkawa	7,800	7,950
Garber	4,600	4,500
Burbank	16,300	16,500
Osage (outside Burbank)	26,600	26,350
Cushing	14,350	14,350
Yale Jennings	9,800	9,650
Davenport	1,150	1,150
Bristow Slick	16,250	16,250
North Okmulgee	10,900	11,250
South Okmulgee	6,350	6,250
Cromwell	7,400	7,400
Papoose	2,800	2,800
Wewoka	3,950	3,950
Seminole	19,950	20,550
East Seminole	3,700	3,100
Bowlegs	19,800	22,050
Searight	10,600	8,350
Little River	42,000	42,300
East Little River	13,750	17,850
Earlsboro	35,100	37,500
East Earlsboro	35,300	41,050
Duncan District	7,300	7,400
Graham	3,500	3,500
Fox	1,200	1,250
Healdton	12,000	12,000
Hewitt	7,200	7,250
Scholem Alechem	13,350	13,400
Pearson	600	650
St. Louis	39,300	40,400
Allen	20,150	20,150
Maud	7,000	6,150
Mission	12,550	14,250
Oklahoma City	73,900	64,050
Sasakwa	11,500	10,200
Konowa	8,000	8,850
Others	59,850	55,400
Total	615,000	616,200

CALIFORNIA

Santa Fe Springs	135,000	152,400
Long Beach	102,500	104,000
Huntington Beach	30,000	29,500
Dominguez	8,500	8,500
Inglewood	17,700	17,700
Midway-Sunset	74,500	72,500
Ventura Avenue	44,000	45,400
Seal Beach	24,000	24,500
Elwood-Goleta	39,400	39,200
Kettleman Hills	12,500	12,700
Others	143,000	143,000
Total	631,100	649,400

KANSAS

Greenwood County	19,000	19,000
Florence-Covert	800	800
Peabody-Ebling	3,350	3,350
Eldorado-Towanda	13,450	13,500
Augusta-Fox Bush	2,900	2,900
Rainbow Bend	1,050	1,100
Russell	3,450	3,450
Churchill	4,400	4,200
Oxford	2,800	2,800
Sedgewick	21,050	21,800
Voshell	9,250	10,250
Others	33,000	34,000
Total	114,500	117,150

NORTH LOUISIANA

	Mar 29	Mar 22
Homer	3,600	3,600
Haynesville	4,600	4,600
Caddo Light	10,100	9,850
Caddo Heavy	2,700	2,700
DeSoto-Red River	3,100	3,050
Elm Grove	450	450
Bellevue	650	650
Cotton Valley	2,300	2,350
Urania	5,350	5,400
Pleasant Hill	750	750
Zwolle	3,850	2,550
Others	5,850	2,700
Total North Louisiana	43,300	38,650

LOUISIANA GULF COAST

Lake Barre	1,850	.....
Port Barre	1,400	1,750
Bayou Boullion	1,400	1,150
East Hackberry	1,200	1,200
Hackberry	1,200	1,200
Edgerly	550	500
Evangeline	1,100	1,100
Lockport	2,800	2,800
Sorrento	100	100
Sulphur Dome	3,350	3,500
Sweet Lake	100	100
Vinton	4,050	4,000
Others	1,400	1,700
Total Louisiana Gulf Coast	20,500	19,100
Louisiana Total	63,800	57,750

ARKANSAS

El Dorado	4,000	4,000
Champagnolle	4,900	4,950
Smackover Light	5,300	5,350
Smackover Heavy	41,100	41,150
Stephens	950	900
Lisbon	1,050	1,050
Nevada	1,100	1,050
Others	200	250
Total	58,600	58,700

MOUNTAIN STATES

WYOMING

Salt Creek	30,300	29,650
Grass Creek	2,000	2,050
Elk Basin	800	700
Big Muddy	2,050	2,100
Lost Soldier	2,950	3,300
Rock River	2,200	2,300
Lance Creek	150	200
Oregon Basin	4,800	4,850
La Barge	1,900	2,250
Others	3,700	2,950
Total	50,850	50,350

MONTANA

Cat Creek	1,200	1,200
Sunburst	6,000	4,950
Pondera	2,050	2,050
Others	50	50
Total	9,300	8,250

COLORADO

Moffats (Craig)	1,100	1,000
Fort Collins	1,400	1,450
Florence	650	600
Others	1,600	1,350
Total	4,750	4,400

NEW MEXICO

Table Mesa	100	100
Artesia	800	800
Hogback	450	450
Rattlesnake	800	1,100
Bal. Lea and Eddy Counties	7,900	8,000
Others	950	950
Totals	11,000	11,400
Total Mountain States	75,900	74,400

EASTERN STATES

(Including Ill., Ind., Ohio, W. Va., Pa., Ky., N. Y.)	120,000	120,250
Michigan	11,750	11,650
Total Eastern States	131,750	131,900

PRODUCTION SUMMARY

East of Rockies	1,807,300	1,812,100
Total U. S.	2,514,200	2,535,900

CRUDE OIL PRICE QUOTATIONS

(Revised to April 1, 1930)

CRUDE PRICE CHANGES

Effective April 1, Humble Oil & Refining Company announced first posting on Refugio Crude, making Refugio heavy crude, below 25 gravity flat price of 75 cents. For Refugio light oils posting is same as Gulf Coast Grade "B" on 25 gravity and above.

Effective April 1, Gulf Coast Pipe Line Company met new prices of Humble Oil & Refining Company.

EASTERN STATES

(Effective November 12, 1929)

Penna Grade Oil in New York Transit Lines (New York)	$3.05
Bradford District Oil in National Transit Lines (Pennsylvania)	3.05
Penn Grade Oil in National Transit Lines (Pennsylvania)	3.05
Penn Grade Oil in Southwest Pennsylvania Lines (Penna.)	3.00
Penn Grade Oil in Eureka Pipe Line Lines (West Virginia)	2.90
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	2.70
Cabell Grade Oil in Eureka Pipe Line Lines (West Virginia)	1.75
Corning 35-cent Grade Oil in Buckeye Pipe Line Co.'s lines	1.80
Corning 25-cent Grade Oil in Buckeye Pipe Line Co.'s lines	1.90
Somerset Oil in Cumberland Pipe Line Lines (Kentucky)	1.55
Ragland Grade Oil in Cumberland Pipe Line Lines (Kentucky) (Effective Jan. 29, 1929)	60
Keister (Pennsylvania)	1.20

CENTRAL STATES

(Effective February 15, 1930)
Posted by Ohio Oil Co.

Illinois	$1.60
Indiana	1.42
Lima	1.65
Plymouth	1.18
Princeton	1.60
Wooster	1.75

WESTERN KENTUCKY

All grades	$1.50

OKLAHOMA-KANSAS

(Effective February 15, 1930)*

Below 25 gravity	$ .60
25 to 25.9 gravity	.66
26 to 26.9 gravity	.72
27 to 27.9 gravity	.78
28 to 28.9 gravity	.84
29 to 29.9 gravity	.90
30 to 30.9 gravity	.96
31 to 31.9 gravity	1.02
32 to 32.9 gravity	1.08
33 to 33.9 gravity	1.11
34 to 34.9 gravity	1.14
35 to 35.9 gravity	1.17
36 to 36.9 gravity	1.20
37 to 37.9 gravity	1.23
38 to 38.9 gravity	1.26
39 to 39.9 gravity	1.29
40 to 40.9 gravity	1.32
41 to 41.9 gravity	1.35
42 to 42.9 gravity	1.38
43 to 43.9 gravity	1.41
44 and above	1.44

*This schedule was adopted initially by Carter Oil Company on January 15, and became general when Prairie Oil & Gas Company adopted it on February 15.

PANHANDLE

(Effective January 15, 1930)

GRAY COUNTY

Below 29 gravity	$ .69
29 to 29.9 gravity	.75
30 to 30.9 gravity	.81
31 to 31.9 gravity	.87
32 to 32.9 gravity	.93
33 to 33.9 gravity	.96
34 to 34.9 gravity	.99
35 to 35.9 gravity	1.02
36 to 36.9 gravity	1.05
37 to 37.9 gravity	1.08
38 to 38.9 gravity	1.11
39 to 39.9 gravity	1.14
40 to 40.9 gravity	1.17
41 to 41.9 gravity	1.20
42 to 42.9 gravity	1.23
43 to 43.9 gravity	1.26
44 and above	1.29

WHEELER COUNTY

Below 30 gravity	$ .72
30 to 30.9 gravity	.78
31 to 31.9 gravity	.82
32 to 32.9 gravity	.88
33 to 33.9 gravity	.91
34 to 34.9 gravity	.94
35 to 35.9 gravity	.97
36 to 36.9 gravity	1.00
37 to 37.9 gravity	1.03
38 to 38.9 gravity	1.06
39 to 39.9 gravity	1.09
40 to 40.9 gravity	1.12
41 to 41.9 gravity	1.15
42 to 42.9 gravity	1.18
43 to 43.9 gravity	1.21
44 and above	1.24

CARSON-HUTCHINSON COUNTIES

Below 32 gravity	$ .72
32 to 32.9 gravity	.78
33 to 33.9 gravity	.81
34 to 34.9 gravity	.84
35 to 35.9 gravity	.87
36 to 36.9 gravity	.90
37 to 37.9 gravity	.93
38 to 38.9 gravity	.96
39 to 39.9 gravity	.99
40 to 40.9 gravity	1.02
41 to 41.9 gravity	1.05
42 to 42.9 gravity	1.08
43 to 43.9 gravity	1.11
44 and above	1.14

SOMERSET

Below 33 gravity	$1.05
33 to 33.9 gravity	1.07
34 to 34.9 gravity	1.09
35 to 35.9 gravity	1.11
36 to 36.9 gravity	1.13
37 to 37.9 gravity	1.15
38 and above	1.17

CALIFORNIA CRUDE OIL PRICES AT THE WELL

(EFFECTIVE MARCH 11, 1930)

Following are the current prices offered by Standard Oil Company for crude oil at the wells: (Price per barrel of 42 gallons in fields indicated)

Gravity	Ventura*	Signal Hill	Alamitos Heights Seal Beach	Huntington Beach	Inglewood	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Elwood Terrace	Torrance	Richfield	Whittier La Habra	Montebello	Coyte Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway-Sunset Elk Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge
14-14.9	$ .70	$ .70	$ .70	$ .70	$ .70	$ .70	$ ..	$ ..	$ .70	$ .70	$ .70	$ .70	$ .70	..	$ .55	$ .55	$ .55	$ .55	$ .55	$ .55
15-15.9	.70	.70	.70	.70	.70	.70	..	..	.70	.70	.70	.70	.70	..	.55	.55	.55	.55	.55	.55
16-16.9	.70	.70	.70	.70	.70	.70	..	..	.70	.70	.70	.70	.70	..	.55	.55	.55	.55	.55	.55
17-17.9	.70	.70	.70	.70	.70	.70	..	..	.70	.70	.70	.70	.70	..	.55	.55	.55	.55	.55	.55
18-18.9	.75	.76	.76	.76	.76	.76	..	..	.76	.76	.76	.71	.76	..	.55	.62	.62	.62	.62	.62
19-19.9	.80	.82	.82	.82	.82	.82	..	..	.82	.82	.82	.77	.82	..	.55	.70	.70	.70	.70	.70
20-20.9	.85	.88	.88	.88	.88	.88	..	..	.88	.88	.87	.83	.87	..	..	.78	.78	.78	.78	.78
21-21.9	.90	.94	.94	.94	.94	.94	..	..	.94	.94	.93	.90	.93	.92	..	.86	.86	.86	.86	.86
22-22.9	.97	1.00	1.00	1.00	1.00	1.00	..	..	1.00	1.00	.98	.97	.98	.95	..	.94	.94	.94	.94	.94
23-23.9	1.05	1.07	1.07	1.07	1.07	1.07	..	..	1.07	1.07	..	1.05	1.04	1.01	..	1.02	1.02	1.02	1.02	1.02
24-24.9	1.08	1.14	1.14	1.14	1.14	1.14	1.14	..	1.14	1.14	..	1.11	1.10	1.07	..	1.09	1.09	1.09	1.07	1.07
25-25.9	1.13	1.21	1.21	1.21	1.21	1.21	1.19	..	1.21	1.21	..	1.17	1.16	1.13	..	1.16	1.16	1.16	1.12	1.12
26-26.9	1.18	1.28	1.28	1.28	1.28	1.28	1.24	..	1.28	1.28	..	1.23	1.23	1.19	..	1.23	1.23	1.23	1.17	1.17
27-27.9	1.23	1.35	1.35	1.35	1.35	1.35	1.29	..	1.35	1.35	..	1.29	1.30	1.25	..	1.30	1.30	1.30	1.23	1.22
28-28.9	1.28	1.42	1.42	1.42	1.42	1.42	1.34	..	1.42	1.42	..	1.35	1.37	1.31	..	1.35	1.35	1.35	1.27	..
29-29.9	1.33	1.46	1.46	1.46	..	1.46	1.39	..	..	1.46	..	1.38	1.41	1.37	..	1.41	1.41	1.41	1.31	..
30-30.9	1.39	1.50	1.50	1.50	..	1.50	1.45	..	..	1.50	..	1.41	1.45	1.43	..	1.47	1.47	1.47	1.35	..
31-31.9	1.45	1.55	1.55	1.55	..	1.55	1.51	..	..	..	..	..	..	1.49	..	1.53	1.53	1.53	1.39	..
32-32.9	1.51	1.60	1.60	1.60	..	..	1.57	..	..	..	..	..	..	1.55	..	1.59	1.59	1.59	1.43	..
33-33.9	1.58	..	..	..	..	..	1.64	..	..	..	..	..	..	1.60	..	1.65	1.65	1.65	1.47	..
34-34.9	..	..	..	..	..	..	1.71	1.32	..	..	..	..	..	1.65	..	..	..	1.71	1.51	..
35-35.9	..	..	..	..	..	..	1.78	1.39	..	..	..	..	..	1.70	..	..	..	1.77	1.55	..
36-36.9	..	..	..	..	..	..	1.84	1.46	..	..	..	..	..	1.75	..	..	..	..	..	..
37-37.9	..	..	..	..	..	..	1.90	1.53	..	..	..	..	..	1.80	..	..	..	..	..	..
38-38.9	..	..	..	..	..	..	1.96	1.60	..	..	..	..	..	1.85	..	..	..	..	..	..
39-39.9	..	..	..	..	..	..	2.02	1.66	..	..	..	..	..	1.90	..	..	..	..	..	..
40-40.9	..	..	..	..	..	..	2.08	1.72	..											
41-41.9	..	..	..	..	..	..	2.14	1.78	..											
42-42.9	..	..	..	..	..	..	2.20	1.84	..											

KETTLEMAN HILLS—55 degrees Gravity and above $1.65 per barrel. *Union Oil Company.

General Petroleum Posts following prices 11-13.9 Gr. 50c, 14-22.9 55c at Kern Front, Fruitvale, Mt. Poso Creek and Rd. Mountain districts.

(See Page 47)

CRUDE OIL PRICE QUOTATIONS (*Continued from Page 46*)

WEST TEXAS
(Effective Jan. 15, 1930)

Crane-Upton, Crockett, Ector, Howard, Pecos and Winkler Counties and Lea County, N. Mex.

Below 25 gravity	$ .55
25 to 25.9 gravity	.58
26 to 26.9 gravity	.61
27 to 27.9 gravity	.64
28 to 28.9 gravity	.67
29 to 29.9 gravity	.70
30 to 30.9 gravity	.73
31 to 31.9 gravity	.76
32 to 32.9 gravity	.79
33 to 33.9 gravity	.82
34 to 34.9 gravity	.85
35 to 35.9 gravity	.88
36 and above	.91

Magnolia posts in Crane, Upton and Winkler Counties. Southern Crude Oil Purchasing Company posts only in Crane, Upton and Winkler Counties.

HOWARD AND GLASSCOCK COUNTY CRUDE
(Effective Jan. 15, 1930)

Below 25 gravity	$ .55
25 to 25.9 gravity	.58
26 to 26.9 gravity	.61
27 to 27.9 gravity	.64
28 to 28.9 gravity	.66
29 to 29.9 gravity	.68
30 to 30.9 gravity	.70
31 to 31.9 gravity	.72
32 to 32.9 gravity	.74
33 to 33.9 gravity	.76
34 to 34.9 gravity	.78
35 to 35.9 gravity	.80
36 and above	.82

MARKHAM
The Texas Company
(Effective Jan. 15, 1930)

All grades	$ .75

CORSICANA HEAVY AND LULING

All grades	$ .75

SALT FLAT AND DARST CREEK

All grades	$1.05

NORTH AND CENTRAL TEXAS
(Effective Jan. 15, 1930)

Ranger, North Texas, Mexia, Powell, Richland, Wortham, Currie, Moran, Nocona and Lytton Springs Crude

(Humble Oil and Refining Company)

Below 25 gravity	$ .60
25 to 25.9 gravity	.66
26 to 26.9 gravity	.72
27 to 27.9 gravity	.78
28 to 28.9 gravity	.84
29 to 29.9 gravity	.90
30 to 30.9 gravity	.96
31 to 31.9 gravity	1.02
32 to 32.9 gravity	1.08
33 to 33.9 gravity	1.11
34 to 34.9 gravity	1.14
35 to 35.9 gravity	1.17
36 to 36.9 gravity	1.20
37 to 37.9 gravity	1.23
38 to 38.9 gravity	1.26
39 to 39.9 gravity	1.29
40 to 40.9 gravity	1.32
41 to 41.9 gravity	1.35
42 to 42.9 gravity	1.38
43 to 43.9 gravity	1.41
44 and above	1.44

SOUTH TEXAS

Mirando	$ .75

GULF COAST
(Effective April 1, 1930)

Grade "A" all companies	$1.05

Grade "B"

Below 25 gravity	$ .90
25 to 25.9 gravity	.93
26 to 26.9 gravity	.96
27 to 27.9 gravity	.99
28 to 28.9 gravity	1.02
29 to 29.9 gravity	1.05
30 to 30.9 gravity	1.08
31 to 31.9 gravity	1.11
32 to 32.9 gravity	1.14
33 to 33.9 gravity	1.17
34 to 34.9 gravity	1.20
35 to 35.9 gravity	1.23
36 to 36.9 gravity	1.26
37 to 37.9 gravity	1.29
38 to 38.9 gravity	1.32
39 to 39.9 gravity	1.34
40 to 40.9 gravity	1.36
41 to 41.9 gravity	1.38
42 to 42.9 gravity	1.40
43 to 43.9 gravity	1.42
44 and above	1.44

CLASSIFICATIONS OF GULF COAST CRUDE

The Texas Company: GRADE A—Beaume gravity not over 26.0 degrees at 60 degrees Fahrenheit; sulphur not over 0.5 per cent; in distilling 500 cc. of the crude that part of the distillate cut between 65 per cent off and 85 per cent off shall have a pour test of zero or lower. GRADE B—All Gulf Coast heavy crudes which do not meet tests for Grade "A" or for Gulf Coast light.

Humble Oil & Refining Company: GRADE A—All crude conforming to the following tests: viscosity not less than 100 seconds Saybolt at 100 degrees Fahrenheit; sulphur not over .4 per cent; Beaume gravity not over 25 at 60 degrees Fahrenheit. Cold tests of distillates having a viscosity of 1000 seconds at 100 degrees Fahrenheit shall not be over 5 degrees Fahrenheit. GRADE B—Embraces all Coastal crude which does not meet the tests for "A" grade crude.

Gulf Pipe Line Company: GRADE A—Beaume gravity not over 24 at 60 degrees Fahrenheit; viscosity not less than 100 seconds universal Saybolt at 100 degrees Fahrenheit; and sulphur not over 0.4 per cent. The yield of 250 viscosity reduced distillate at 100 degrees Fahrenheit not less than 30 per cent, and this 30 per cent not heavier than 20 Beaume, and its pour test not above zero Fahrenheit. The reduced distillate to be secured by reducing the crude with fire and steam until the bottoms have a flash of not less than 540 degrees Fahrenheit, and not more than 560 degrees Fahrenheit open cup, and the entire distillate obtained in this way reduced to a distillate of 250 viscosity. The 10 per cent cut in the original distillate having an average viscosity of 500 seconds at 100 degrees Fahrenheit to have a pour test not higher than 5 degrees Fahrenheit. GRADE B—Embraces crude which does not meet test for "A" grade.

Sun Pipe Line Company: GRADE A—Viscosity not less than 100 seconds at 100 degrees Fahrenheit Saybolt. Sulphur not over .4 per cent. Beaume gravity not over 25 at 60 degrees Fahrenheit. Cold Test: of distillates having viscosity of 1000 seconds at 100 degrees Fahrenheit shall not be over 5 degrees Fahrenheit A. S. T. M. Method. GRADE B—All Coastal crudes which do not meet specifications for Grade A crude.

REFUGIO
(Effective April 1, 1930)

Below 25 gravity (Heavy)	.75

REFUGIO (Light)

Same as Gulf Coast 25 gravity and above.

PETTUS
(Effective April 1, 1930)

All Grades	$1.30

BRENHAM

All grades	1.10

STATE CRUDE PRODUCTION TAXES

Oklahoma—Three per cent of gross value, less royalty interest.

Texas—Two per cent of gross value.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 per cent of gross market value.

Montana—Two per cent of gross value at well.

Wyoming and New Mexico—production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

WYOMING-MONTANA
(Effective Feb. 15, 1930)

Wyoming

Byron	$1.33
Ferris	1.60
Elk Basin	1.45
Grass Creek	1.45
Rock Creek	1.25
Lost Soldier	1.05
Lance Creek	1.53
Mule Creek	1.20
Notches	.65
Big Muddy	1.33
Osage	1.65
Hamilton Dome	.85
Pilot Butte	1.75
Torchlight-Greybull	1.65
Lander	.80
Rex Lake	1.10
South Casper Creek-Poison Spider	1.00

SALT CREEK
Midwest Refining Company

29 to 29.9 gravity	$ .90
30 to 30.9 gravity	.96
31 to 31.9 gravity	1.02
32 to 32.9 gravity	1.08
33 to 33.9 gravity	1.11
34 to 34.9 gravity	1.14
35 to 35.9 gravity	1.17
36 to 36.9 gravity	1.20
37 and above	1.23

MONTANA
(Effective Feb. 15, 1930)

Sunburst	$1.65
Cat Creek	1.48
Lake Basin	2.20

NEW MEXICO

Artesia	1.03
Hog Back	1.43
Maljamar	.95
Jal and Lea	*

(*) West Texas price scale used by The Texas Company and Humble Oil & Refining Co.

CANADA
(Effective Feb. 15, 1930)

Oil Springs	2.12
Petrolia	2.05

LOUISIANA-ARKANSAS
(Effective Jan. 16, 1930)

Homer, Haynesville, Caddo, El Dorado, De-Soto and Crichton and Cotton Valley*

27 to 27.9 gravity	$ .78
28 to 28.9 gravity	.84
29 to 29.9 gravity	.90
30 to 30.9 gravity	.96
31 to 31.9 gravity	1.02
32 to 32.9 gravity	1.08
33 to 33.9 gravity	1.11
34 to 34.9 gravity	1.14
35 to 35.9 gravity	1.17
36 to 36.9 gravity	1.20
37 to 37.9 gravity	1.23
38 to 38.9 gravity	1.26
39 to 39.9 gravity	1.29
40 to 40.9 gravity	1.32
41 to 41.9 gravity	1.35
42 to 42.9 gravity	1.38
43 to 43.9 gravity	1.41
44 gravity and above	1.44

*Shreveport-Eldorado's postings stop at above 40 gravity.

The posting on Cotton Valley is same as Caddo. From 36 to 52 and above the regular gravity schedule is followed.

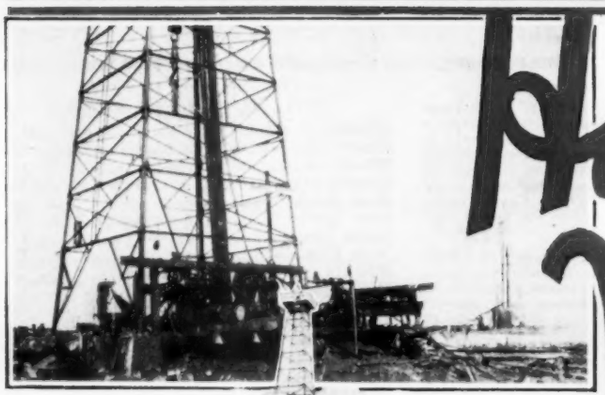
The Texas Company pays North Texas gravity scale in North Louisiana.

STEPHENS

Below 28 gravity	$ .70
28 to 28.9 gravity	.75
29 to 29.9 gravity	.80
30 to 30.9 gravity	.85
31 to 31.9 gravity	.90
32 gravity and above	.95

SMACKOVER

Below 24 gravity	$ .85
24 and above	1.00



Half a Million

BARRELS OF OIL FROM THIS WELL

thru one joint

of THE LAYNE

MILLED GROOVE *Screen*

~and still going strong!

Here is a mighty screen that has produced half a million barrels of oil through one joint, and still producing approximately 8,000 barrels daily.

This remarkable production performance was established from the Kirby A-8 well, Barbers Hill, Texas.

Plus its greater production exclusiveness, Layne Milled Groove Screen guarantees you great strength, for, under recent severe tensile tests by Pittsburgh Testing Laboratories, Milled Groove was proven 102½ tons strong, and its sensational ability to safely stand the full weight of more than 8000 feet of drill pipe.

You can't go wrong with the greater production Milled Groove! It is a cushion against "cutting" high pressures—a stimulation to low pressure—install the Layne Milled Groove Screen instead of wishing you had.

The Layne & Bowler Co.

Houston THE LAYNE **Texas**

Increases Production

The Layne New York Co., 30 Church St., New York

The Layne & Bowler Corp., Los Angeles, Calif.

Vickers, Limited, London, England

A QUARTER CENTURY - OF EXPERIENCE AND DEVELOPMENT

PERSONAL MENTION-MEN YOU KNOW

H. P. Grimm, member of the committee of five experts chosen by Secretary Wilbur to study the petroleum needs of the country, and umpire for 14 California fields, is meeting with the other committee members in New Orleans. R. E. Allen, assistant to Grimm, is in charge during the umpire's absence from California.

William Kammerer, pioneer oil operator and manager of the Holly Oil Company of Los Angeles, left Los Angeles March 31 on an extended Eastern trip. He will sail through the Panama Canal to New York, returning by automobile to California, via Wyoming and Montana. He will be accompanied by Mrs. Kammerer and his daughter, Mrs. Charlotte Rickenbacker of Union Oil Company.

A. C. Marshall, who has been connected with the Union Oil Company since 1914, has been elected assistant treasurer.

C. L. McCorkindale has been appointed manager of the petroleum equipment marketing division of Emil Brisacher and Staff, with headquarters at Los Angeles.

Charles Cosby, formerly with Rio Grande Oil Company at Long Beach, has been appointed superintendent of the company's operations in the Maricopa Flats district.

Harold W. C. Prommel, well known Denver consulting geologist and mining engineer, has recently been appointed chief geologist for the Soviet government of Russia. Mr. Prommel has been internationally known for his work in South America, Mexico, and Cuba, as well as his theories on the structures in southeastern Utah which he maintains are salt domes similar to those producing in the Gulf Coast region. Two wells are to be drilled in Utah to test out this interesting theory.

S. E. Damon and Richard R. Yett, attorneys of Austin, Texas, who have been in the land and legal department for Petty Petroleum Company, have resigned to form a royalty company with headquarters in the Norwood building, Austin.

Members of the Rocky Mountain Association of Petroleum Geologists who attended the convention of the American Association of Petroleum Geologists at New Orleans this month are: Dr. F. M. Van Tuyl and Professor J. Harlan Johnson, both of the Colorado School of Mines at Golden, and R. C. Coffin and Everett S. Shaw, both of the Midwest Refining Company.

H. L. MONTGOMERY
Manager Cities Service Gas Company, Bartlesville, Oklahoma

R. S. McMillan, oil operator of Los Angeles, and a party of five stopped in Shreveport on the night of March 25 en route by air from the west coast to Havana, Cuba. The party hopped off March 26 for Havana. Eddie Martin and Saul Spiegel were pilots. A trimotored Fokker F-10-A was used.

J. L. Dellinger, assistant to the vice-president in charge of production for the Shell Petroleum Corporation with headquarters at St. Louis, visited the district offices of the company at Dallas during the past week.

C. L. Sutton, general superintendent of production for the American Maracaibo Company in the Mid-Continent district with headquarters at Fort Worth, has resigned to go to Tulsa as manager of production for the new company being created through the merger of the Marquette Oil Company, Oklahoma Company and McCulloch Oil Company. Sutton will have offices in the Philtower building.

B. L. LeFever, production superintendent, succeeds Sutton with the American Maracaibo Company, and offices will be transferred from Fort Worth to the Petroleum building, Big Spring, Texas.

Dave C. Stewart, vice-president Magnolia Pipe Line Company, Dallas, departed last week for Butler, Pennsylvania, because of the death of a sister in the latter city.

Harry Botsford, Titusville, Pennsylvania, secretary of the Society for the Development of Internal Combustion Power, is recovering after an operation.

Frederick G. Clapp, consulting geologist and petroleum engineer, New York, has returned after nearly three years continuous absence abroad. During the first year of this period he was petroleum adviser to the government of Persia, since which time he has been actively studying conditions (economic, political and geological) affecting the oil industry of Europe and the Near East. During the last year a business address was established in France and that country was intensively studied with reference to its oil needs and its potentialities as a possible producer. In addition, six other European countries were given attention, as well as Egypt, Palestine, Syria, Turkey, Iraq and Persia. During his absence in the Eastern Hemisphere, Mr. Clapp was selected a member of the Institution of Petroleum Technologists, Geological Society of London, Societe Geologique de France and La Societe Geographique (Paris).

John P. Herrick of Olean, New York, formerly engaged in the oil business and a well known writer of petroleum subjects, has been spending the winter in Los Angeles.

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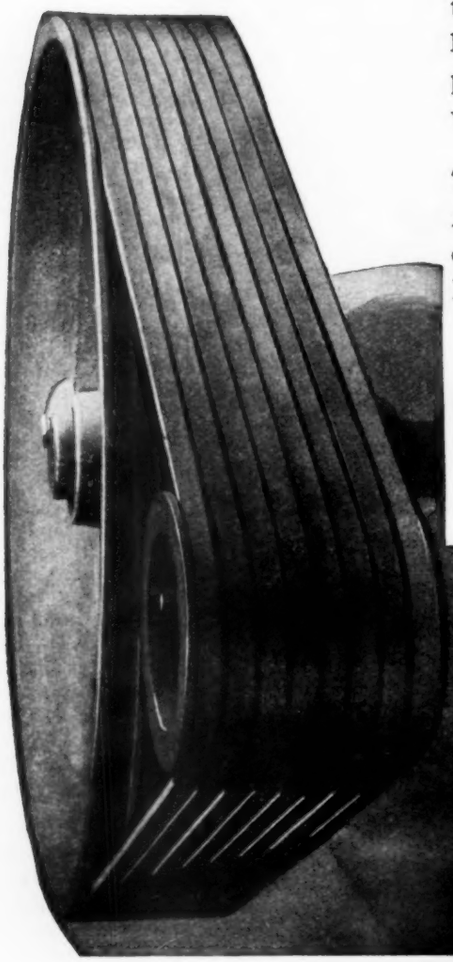

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Gilmer

Originators of the Endless Belt

Oklahoma--Kansas Field Notes

WARREN BAKER, *Staff Representative, Tulsa, Oklahoma*

Wilcox Sand May Be Found in Oklahoma City Well

TULSA.—The past week was the most exciting one experienced in the stirring history of the Oklahoma City field. The most interesting development from the standpoint of the general oil man was the tremendous well in the extreme southern end that defied efforts to control it. More important, was the finding of what is believed to be Wilcox sand production. Ranking beneath these developments was a half mile north extension producer.

If Sinclair Oil & Gas Company's School Land 1, NE NE SE Section 36-11-3w, is producing from the Wilcox sand, as generally believed, the potential of Oklahoma City are materially increased. This well is the western most producer along a line of four wells comprising the south most edge of the Oklahoma City pool. Belief that it is producing from the Wilcox sand comes from the fact that it encountered the Simpson sand at 6518 feet and at 6603 feet entered a true sand. The correct geological column would indicate that the latter is the Wilcox. It has a total depth of 6632 feet, where it flowed 223 barrels in 30 minutes.

Apparently the Wilcox sand producing area will be found on the flank of the Detrital sand zone, which itself is found on the flank of the steep rising Arbuckle lime area. If this condition exists everywhere that the Detrital is

Tulsa.—Indian Territory Illuminating Oil Company's Mary Sudik 1, Section 31-11-2w, southern edge of Oklahoma City field, broke loose again Monday night and was flowing wild Tuesday. The new leak came through a casing collar and at first flowed at an angle close to the ground. The break became larger and oil again began flowing over the top of the rig. More than 26,000 barrels of oil have been picked up from the ground.

Sinclair Oil & Gas Company's School Land 1, Section 36-11-3w, which found the first Wilcox sand production in the field, produced 5007 barrels the first 12 hours. It is making 10 million feet of gas.

Mary Sudik 1

Warren 7

found it would mean that at the end of the Detrital horizon on the northwest and south extensions to the field the Wilcox sand productiveness would be available to further spread the producing limits of the already large oil yielding area. Much of this is speculation, but would seem to have a pretty good background.

In this connection the Indian Territory Illuminating Oil Company's Jones 2, NE NE NW Section 31-11-2w, has found a sand at 6560-85 feet that is believed to be the Wilcox sand. The upper formations of the regular geological column have also been found in this well. Cores have shown the sand to be well saturated.

An important test is the Sinclair Oil & Gas Company's School Land 1, NEc Section 36-11-3w, one-half mile north of the first Wilcox sand producer at Oklahoma City. This well is drilling deeper from the Detrital horizon. At present it is still in broken sand at 6505 feet, where it made 1700 barrels in 23½ hours.

Oklahoma's Largest Well Flows Wild

What is estimated to be the largest oil well ever completed in Oklahoma, and perhaps the largest sweet oil producer in the world defied efforts of a large crew to shut in last week. This well, Indian Territory Illuminating Oil Company's Mary Sudik 1, NEc SW Section 31-11-2w, along the south limit at Oklahoma City, blew in unexpectedly Tuesday morning at six o'clock. First, it made only dry gas, but drilled itself in and commenced spraying oil in increasing volume. Estimates were that it was making between 150,000,000 and 200,000,000 cubic feet of gas and from 48,000 to 72,000 barrels of oil per day.

When the gas first blew out 20 joints of drill pipe were carried from the hole and remained twisted in the derrick. The well flowed open until 8:30 p. m. Sunday night when after a heroic effort the crew managed to cap it despite pressure estimated at 2000 pounds per square inch. Only a small leak in the cellar connections remained.

Oil mist is said to have fallen as far as Norman a distance of about 11 miles. All wells in the area were shut down as a result and many to the north had to cease operations when a shift in the wind sent the spread in that direction. The roar of the well was deafing at a distance of a quarter of a mile and could be heard several miles. Heavy guard kept the crowd at a safe distance from the well. The first line of guards were placed two miles from the well.

North Extension Well

Producing territory of the field was extended one-half mile north by Heenan-Coe Cook-Cunningham 1, NW SW NE SW Section 1-11-3w, which made 1017 barrels the first hour, 843 barrels the second, 785 the third and 920 barrels the fourth hour. Total depth is 6407 feet in the Detrital sand found at 6348 feet. Later in the week it was opened up and made 1114 barrels in one hour and 15 minutes.

Coline Oil Corporation's Warren 7, NE SW SW Section 18-11-2w, northeast part of the field, flowed wild but without serious damage. A string of drill pipe which was protruding from the hole was turned loose and allowed to fall in, which permitted the closing of the mastergate. A problem of killing the well so that the bottom string of pipe can be set now confronts the operators.

Skelly Oil Company's Hoops 3, NE NW NE Section 31-11-3w, in the southern area, had the Detrital formation from 6305-85 feet, with the Arbuckle lime at 6399-6400 feet. When bailed down 4000 feet it blew in breaking the connections but was immediately shut in to install new connections.

In the northwest edge of the field, Wirt Franklin Petroleum Corporation's Eacock 1, NEc Section 11-11-3w, was added. The first hour it made 613 barrels at 6500 feet.

Prairie Wildcat Opens New Pool in Western Kansas

WICHITA. — A new oil pool has been opened in Western Kansas by the Prairie Oil & Gas Company's wildcat test on the Davidson tract, NW SE Section 4-16-11w, northeastern Barton County. One hundred and fifty-five barrels of oil, testing 38 degrees gravity, has been recovered from the well by swabbing, in 18 hours. A trace of water is reported to be in evidence.

The top of the producing horizon was at 3314 feet. The first oil was encountered at 3332 feet and the total depth is 3335 feet. The hole filled up slowly at this depth. The formation is being called the Gorham, which is found productive in Russell County and other counties of Western Kansas.

The importance of the new pool cannot be determined at this time, but it is creating considerable interest due to its distance from other production. It is about 30 miles north and west of the Schurr pool in Rice County, 20 miles southeast of Hoisington in Russell County.

Immediately upon the drilling in of the producer Prairie Oil & Gas Company officials announced that they were willing to shut in or pinch the new producer to any amount asked by offset owners if development could be held back. The well is on a good size block, but Twin State Oil Company and Deep Rock Oil Corporation own two pieces in the same section with the well. These companies have agreed to delay drilling on their property. Expiration dates, however, prevent any great length restriction of development, since the expiration date is March 31, 1930.

Voshel Field Extended

An important extension to the Voshel pool, McPherson County, Central Kansas, occurred last week when the E. W. Marland, Inc., Morehouse 1, SW NW Section 3-21-3w, came in for nearly 600 barrels per day from the Wilcox sand found at 3408 feet and drilled to 341[illegible] feet.

The new producer is one-half mile north of production and gives the pool an extended producing area in a direction that was not believed to look overly bright. This well is on a direction line from the field to the chat producer in Section 34-20-3w, which is known as the Gratten extension. Two failures have been drilled approximately one mile north of the E. W. Marland, Inc., well, shutting off the possible connecting of the two areas.

A south extension was also made at Voshel. Shell Petroleum Corporation's Koehn 1, NE NW NE Section 16-21-3w, bottomed at 3395 feet in the Wilcox sand encountered at 3388 feet, produced 575 barrels the first 19 hours. It is slightly lower than other wells in this part of the field and may result in some of the older producers being deepened further into the producing horizon.

All was not bright and rosy in the Voshel area, however, as several failures were among the completions. Along the east edge of the field in the south portion, Prairie Oil & Gas Company and T. B. Slick's Stucky 3, topped the Wilcox sand at 3440 feet. It is now shut down with a hole full of water at 3449 feet. Offsetting this well to the north, Sinclair Oil & Gas Company's Voshel 5, was also a dry hole.

Of interest along the wast side of the field was the Indian Territory Illuminating Oil Company's Voshel 2, SE NE NW Section 9-21-3w, which is now 81 feet in the Wilcox sand, producing 850 barrels. The thickness of the sand body has revived hopes along this edge of the pool, where prospects have been waning.

A mile and a half north of the Voshel pool, offsetting the T. B. Slick, Pryor & Lockhart Gratten extension producer, the same parties' Stucky 1, SE SW SW Section 27-20-3w, found the chat formation 46 feet higher than the Gattten, which is making 2,000,000 cubic feet of gas and considerable oil. The Stucky test is making 5,500,000 cubic feet of gas from the chat at 3009-3045 feet. It is a north offset.

Barber County Test

A test that has been attracting considerable interest is the Skelly Oil Company's Temple Ranch 1, SW NE Section 13-34-15w, in the southwestern part of Barber County. This well has been reported a commercial producer several times within the past couple of weeks, but is still in the undetermined zone. It has proven quite troublesome. Total depth is 5246 feet in the Viola lime topped at 5241 feet, where it showed oil and gas, though between

000 and 4000 feet of water. The gas was estimated at 3,000,000 feet. The ve-inch casing was set to shut off the pper water, but it failed to hold. At ne time it made a small flow. A sec- nd attempt to run the pipe resulted in t freezing. It still has considerable pen hole, while the crew is trying gain to cement the pipe.

Miscellaneous Reports

The LyGrisse pool of eastern Sedgwick County, Central Kansas, was carried one-half mile north by the Shell Petroleum Corporation's Stollei 1, SW NE SW Section 11-26-2e, which is slopping over from the Viola lime at 3165 feet. Connections are being made.

Darby Petroleum Corporation and Tom Slick Oil Company's Peasel 1, NWc Section 33-31-1w, which has started a small drilling campaign near Wellington, Sumner County, after finding 100 barrels in the chat horizon at 3656-69 feet, is now drilling below 4000 feet on its way to test the Wilcox sand.

Numerous showings of oil and gas in wildcat tests during the past week promise that Kansas will have the attention of oil men for several weeks as they keep an eye on the outcome of these showings.

Industrial Safety Meet at San Francisco

San Francisco. The eighth annual California Industrial First Aid Meet, and seventh annual Pacific Coast Safety Conference will be held here May 14, 15, 16, 1930. Headquarters have been established at the Palace Hotel, San Francisco. The first Aid meet will be held at the Scottish Rite auditorium.

Speakers at the conference will deal mainly with the subject of industrial safety. The speakers have not yet been announced but it is expected that such an announcement will shortly be made.

As a new departure the industrial first aid meet will include teams representing California industries and also industries from outside of the state. The Salt Lake City police department has already signified its intention to send a first aid team to the 1930 meet.

The contest will be held this year in the evening instead of the afternoon, as has been the custom in the past, to enable all of those interested in first aid to attend. The committee in charge expects a large entry list in the industrial first aid meet and is planning to accommodate representatives of industries throughout the West who will attend the safety conference.

Both the safety conference and the industrial first aid meet are under the auspices of the California Safety Society.

Beaumont, Texas.—Coastwise water shipments of Sun Oil Company from Sun and Sabine Pass crude oil terminals on the ship channel below here amounted to 1,028,316 barrels during March.

Magnolia Sells Natural Gas Units to New Utility Combine

DALLAS. — Magnolia Petroleum Company withdrew from the field as a major unit in the natural gas transportation and marketing industry March 27 through the sale of all holdings of Magnolia Gas Company and Latex Gas Company, subsidiary companies, to Electric Bond & Share Company and Moody-Seagraves for a cash consideration of $47,250,000. This deal has been hanging fire since the middle of October, 1929, when the latter interests posted $1,000,000 forfeit money for an option to buy the properties before the close of 1929. Owing to the purchasing companies negotiating a series of gas property mergers, the option to buy the holdings of Magnolia Petroleum Company was extended on several occasions by increasing the forfeit to $1,750,000. Operations and all profits earned were retained by Magnolia Petroleum Company during this period.

The physical properties of Magnolia Gas Company will be absorbed by United Gas Corporation, which is a newly created concern formed by Moody-Seagraves and Electric Bond & Share Company as result of the merging of a group of companies. The principal units contributed to the pool by the latter concern are the Louisiana properties of Louisiana Gas & Fuel Company and Palmer Corporation, which are controlled through a subsidiary known as Electric Power & Light Corporation. Moody - Seagraves is throwing United Gas Company and a group of its subsidiaries into the pool.

Magnolia Gas Company was organized by Magnolia Petroleum Company in 1924 to supply natural gas from the Cotton Valley field, Louisiana, and a series of fields on the Texas-Louisiana line to its refinery at Beaumont. The first welding on this line started June 15, 1924, and it was completed in December, 1924. This unit consisted of 215 miles of combination 14-, 16 and 18-inch pipe. A second unit consisting of about 200 miles of combination 14-, 16- and 18-inch pipe was completed about June 15, 1927, from Latex station, located on the Louisiana-Texas border, to Dallas and Fort Worth for industrial fuel market, while a third unit, extending from Saperta station, Cotton Valley field, to the Monroe and Richland fields, Louisiana, was completed about November 1, 1928. The latter extension was built to provide additional gas reserves, and consisted of 106 miles of combination 16-, 18- and 20-inch welded pipe. The most recent gas line project undertaken by Magnolia Gas Company consisted of the building of 90 miles of combination 18- and 20-inch line from Mathis, San Patricio County, to San Antonio, with a 25-mile 14-inch extension from San Antonio to New Braunfels. About 75 miles of large lines extend from Mathis to Bruni, Agua Dulce and other nearby fields.

Approximately 750 miles of 14- to 20-inch lines are included in the transportation system of Magnolia Gas Company, and average daily gas sales amount to 100,000,000 cubic feet.

Latex Gas Company functions as a gas distributing company for Magnolia Gas Company. From 40,000,000 to 50,000,000 cubic feet of gas is consumed daily by the Beaumont refinery of Magnolia Petroleum Company, and an additional large volume is used daily by the company's two refineries at Fort Worth. Contracts have been made with the gas line purchasers to continue these gas deliveries.

Gas rights to approximately 500,000 acres of proven and semi-proven land in Southwest and East Texas and Louisiana are being surrendered by Magnolia Petroleum Company to the purchasers of the gas line properties. However, Magnolia Petroleum Company is retaining its gas rights to a large volume of acreage held in the Texas Panhandle and Oklahoma, and may later use same as a basis for re-entering the natural gas business.

Natural gas marketing business of Magnolia Gas Company and Latex Gas Company figured prominently in the cash transaction. Magnolia Gas Company's trunk line extending from North Louisiana through East Texas to Beaumont is virtually paralleled by a Moody-Seagraves trunk line, while a similar condition exists on the San Antonio unit. The purchasing companies are making their first appearance in the Dallas-Fort Worth district, thereby invading the heart of the natural gas marketing territory of the Lone Star Gas Company.

Jackson, Miss.—Pearl Valley Oil & Gas Company has been chartered with a capitalization of $275,000. Stewart Gammill, head of the Lauderdale Oil & Gas Company and of the Home Oil Producing Company, is president. This company has 1000 acres checkerboarded around the Gulf Oil Company's Rainey 1 and the Jackson Oil & Gas Company's Mayes 1.

Meridian Natural Gas Company has shut down at 2826 feet in Mattie Houser 1, Section 33-8-18, Lauderdale County. The bit was in sandy shale. The contract depth was 2800 feet.

Amerada Petroleum Corporation has shut down to repair rig in sandy lime at 5200 feet in Campbell 1, Section 24-12-2w, Yazoo County. Lincoln Oil & Gas Company is arranging to abandon Pat Case 1, Section 218n-6e, Lincoln County, at a total depth of 2221 feet.

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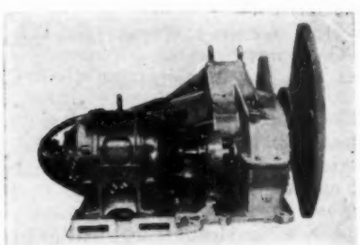

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North and West Texas Field Notes

H. H. KING, *Staff Representative, Fort Worth, Texas*

Judkins Production Increasing With Four Lines Waiting

SAN ANGELO, Texas.—Semi-wildcat tests in Ward County were showing for commercial oil producers early this week in the 2600-foot sandy lime horizon and are located more than two miles from the nearest production. Side Richardson, Frank Kelsey and Magnolia Petroleum Company's O'Brien 1, located in the northwest corner of Section 5, and northeast of the Gulf-O'Brien field, was rated as a 100-barrel producer or better while coring and drilling with rotary in broken formation at 2555 to 2682 feet.

Three 500-barrel tanks have been erected to make a production test at the 2700-foot level. Gulf Production Company is confronted with three offsets to this new producer. C. C. Dorr and Atlantic Oil Production Company's Costleys and Dorr 1, located on the south line of Ward County and in the northeast part of Section 2, J. Howe Survey, is flowing oil by heads from sandy lime at 2612 to 2614 feet, and is estimated at 80 barrels daily.

Gas flow estimated at 1,000,000 cubic feet is accompanying the oil, which is of lower gravity than usually found in the county. A string of six-inch casing is to be run because of more than 100 feet of open hole. This new producer is midway between two producers on the Bennett land and the Pecos River.

Atlantic Pipe Line Company will run the oil. One producer was added to the Judkins field, Ector County, during the past week, but it was a smaller well than earlier completions on adjoining leases. Humble, Penn and Atlantic interests' York 2 encountered tight lime formation and flowed 210 barrels after drilling 88 feet into the oil horizon to a total depth of 3702 feet.

Leases on two tracts considered proven for oil production in the Judkins field failed to command the expected high prices when sold to the highest bidder by the University of Texas March 29, probably due to the University reserving one-sixth of the oil royalty. Transcontinental Oil Company was awarded lease on the south 160-acres of the north one-half of Section 3, Block 35, for $600 per acre cash bonus, and will start a test immediately in the northeast corner to offset a 600-barrel producer. This new test requires an east offset for Cosden Oil Company. Skelly Oil Company bid $77,775 cash for lease on the 80-acre tract, comprising the S½ of NW¼ Section 2, Block 35. The University reserved one-sixth of the oil royalty and one-eighth of the gas royalty under both tracts.

Steady production gains are now assured for the Judkins field, which averaged 4185 barrels daily from five flowing wells during the past week, as new completions will be contributed each week by the 30-odd operations under way. Ample market and pipe line facilities to accommodate such increases are now assured from the four lines now connected. Humble Pipe Line Company is placing the finishing touches on its station to start operating its six-inch carrier, which was completed last week.

Pipe line connection and market outlet for the lone wildcat oil producer in Andrews County, and five additional tests drilling in the general area, are offered by the Atlantic Pipe Line Company which will build a 70-mile eight-inch extension line from Midland station through the above area to the Hobbs field, New Mexico.

Recording a flow of 63,000,000 cubic feet of gas from borken sandy-lime at 1465-1520 feet proved to be an unusual occurance for Pecos County during the past week. This heavy volume of gas was encountered by the Transcontinental Oil Company and Arkansas Fuel Oil Company's Matthews-Smith 1-A, located one mile west of the southwest edge of the Yates field. The gas production dropped about one-fourth in volume when the well was allowed to flow open for 30 minutes.

Drilling progress was believed to have been made within the past week on the Big Lake Oil Company's University 3-C, Big Lake field, after the crew pounded on hard limestone at 8540 feet for nearly a month without success. This well is the deepest hole outside of California, and is loaded with salt water to control upper oil and gas production while attempting to deepen with cable tools. The line measurements recorded a new depth of 8545 feet March 31, but normal stretch of the wire line may account for a portion of the added depth credited to the well. University 1-C is now the most interesting deep test in the field. An increase in gas was encountered prior to the loss of cutters in the hole while drilling with rotary in black sandy-shale at 8497 feet. Fishing tools have been pressed into service.

Van Completions Extending Area Showing Favorably

CORSICANA, Texas.—Completion of five flowing wells in the Van field during the past week swelled production to approximately 15,750 barrels daily, with back pressure maintained on all the producers. The field has 15 wells on production and sufficient drilling tests to double the number before the close of April.

Welding of the first sections of Pure Oil Company's trunk line from the field to Smiths Bluff, near Beaumont, began March 27, and plans are to have this 10-inch carrier in operation next July. When completed it will be about 211 miles in length, with three main line stations, including the one near the field. Construction crews are to work from both ends of the line, and each are scheduled to weld one and one-half miles of pipe daily. A. O. Smith Corporation has the contract to furnish the double bell joints of pipe in 30-foot lengths, and also to do the welding, using the electric process. All other construction work is to be done by Pure Oil Company under the direction of W. Mac Averill, manager of the pipe line division in Texas. Current production of the field is crowding tank car shipments, and two 55,000-barrel steel tanks are being erected on the Van field tank farm, while three others are slated to follow as preliminary steps for the erection of a big tank farm.

Greater penetration of the Woodbine horizon by outpost wells completed during the past week on the north and southeast edges of the Van field yielded big producers to discount the possibilities of the producing area breaking off sharply. The Texas Company's R. V. White 1, located on the north end of the producing area, gauged 1150 barrels during the first full 24-hour period, flowing through tubing and small choke from sand at 2753-2990 feet. The same company's R. A. Tunnell 1 recorded an initial flow of 1350 barrels through tubing and small choke after logging broken sand at 2763-2881 feet, thus be-

coming the furtherest well to the southeast of the main field. Pure Oil Company's A. D. Clark 1, two locations west, is credited with making 1450 barrels initial under similar restrictions from broken sand at 2738-2898 feet. Shell Petroleum Corporation's third completion on the I. P. Tunnell farm established a new mark for sand thickness when it logged the formation from 2512 to 2902 feet, and gauged 1530 barrels daily, flowing through tubing and choke.

Cranfill-Reynolds Company is starting its second test in close vicinity of Van production, having made location to drill on a strip of land extending along the north line of the A. D. Clark 24-acre lease of Pure Oil Company in the southwest corner of the Walling Survey, and a short distance southeast of Van townsite. This strip is 101½ feet in width and about 1100 feet long, rotary drilling contract has been awarded to Roy Black. Cranfill-Reynolds Company is drilling below 200 feet on the Coker-Ledbetter five-acre tract, located northeast of the Van field. Hill & Hill, Fort Worth operators, are seeking drilling permit to make a test in the heart of Van townsite, being on the old blacksmith lot, being 40 by 60 feet in area. These proposed tests are not included in the unit plan of development.

Will Thompson, Upchurch and associates of Corsicana are moving in materials to try for production southwest of the unitized area of the Van field, and located on the Owlet Green school lot, McKinney & Williams Survey. Wheelock & Collins, Corsicana, have the contract to drill the test to the Woodbine horizon. E. L. Chapman, Fort Worth operator, has made contract to drill in the northwest corner of the J. B. Clark 76-acre tract, located east of production and outside the unitized area, having acquired an outstanding undivided interest in the farm. Chapman made contract with A. M. Sutton of Tyler to drill this test.

Pettus Crude Price Set at $1.30 Flat

Houston.—In the new crude price bulletin which it issued effective April 1, Humble Oil & Refining Company provides for the initial posting for oil produced at the Pettus field, Bee-Goliad Counties, with a flat rate of $1.30 per barrel.

There is no pipe line outlet at Pettus, but Humble Pipe Line Company is building an eight-inch line between the Refugio field and the Humble Oil & Refining Company refinery at Ingleside on the Gulf Coast, and in the event of the development of sufficient production at Pettus, the Refugio line will be extended there.

At present there are only two producing oil wells at Pettus, although there are also several gas wells. One of the oil wells is owned by Humble Oil & Refining Company, and the other by Union Producing Company, and those two companies hold a large percentage of the promising acreage of the structure.

Humble Oil & Refining Company has a tank car rack at Pettus, and is loading its own production of the Pettus field there as well as that of the Union Producing Company. The Texas Railroad Commission has authorized a rate of eight cents per 100 pounds on crude petroleum from Pettus to Ingleside and Corpus Christi and nine cents to Aransas Pass. This represents a rather attractive rate of slightly less than 25 cents per barrel on crude moving to the Ingleside refinery.

Late developments in Houston Oil Company's Portis 1, wildcat located in the A. Smalley Survey, Bee County, 1½ miles southeast of oil production at Pettus, indicate further limitation of possibilities of production on the southern portion of the structure. Oil sand was cored in that well at 3932-33 feet, but according to reports in Houston on April 1, the drill stem test which had just been made showed salt water with a scum of oil.

The Houston Oil Company well is reported to be 33 feet lower structurally than the nearer of the two Pettus oil wells, Humble Oil & Refining Company's McKinney 1.

Morgan Oil Corporation's Ray 1, which is located one mile southwest of Houston Oil Company's Portis 1, and which has been abandoned at 4450 feet after testing salt water at 3959-65 feet, was 78 feet lower structurally than Humble Oil & Refining Company's McKinney 1.

Barbers Hill Test Nearing Level of Deep Production

HOUSTON.—Humphreys Corporation's Kirby 8-A, discovery well of a 6400-foot sand on the northwest flank of Barbers Hill, recently passed the 500,000-barrel mark in total production. Through March 30 it had produced 502,000 barrels, and at that time was flowing around 2900 barrels daily. This well came in January 4, 1930.

Encouraged by the performance of this prolific well, Mills Bennett Production Company and Yount-Lee Oil Company are attempting to find the 6400-foot sand on the north and west flanks of the field, respectively, and both companies are now nearing the deep zone.

Yount-Lee Oil Company's No. 1 deep test on the Zadie Fisher tract, is drilling sand and shale at 6031 feet. Mills Bennett Production Company's deep test on the north flank is Barber 2, which early this week was reported drilling at 6400 feet.

Humphreys Corporation's A. E. Barber F-1, an offset to the same company's Kirby 8-A, located 160 feet south of that well, was drilling below 5000 feet on April 1.

Humphreys Corporation, which is one of the largest producers at Barbers Hill, with daily recovery there at present of approximately 7200 barrels, has material en route for construction of an 80,000-barrel steel tank in the field. It already has one 55,000-barrel tank there. The company recently applied for a permit to build a 200-foot dock on its property at Lynchburg, which has 1000 feet of frontage on the Houston ship channel, and which is located adjacent to the Lynchburg docks of Gulf Production Company. While the building permit has been applied for the company as yet has only tentative plans for the dock and for a contemplated pipe line to connect it with the Barbers Hill field.

Average daily production of Barbers Hill during the week ending March 29 was 27,800 barrels. Aside from Refugio, it is the leading field of the Gulf Coast now from the standpoint of production. It is producing more than any other coastal salt dome field.

During the past week five new wells were completed at Barbers Hill. Sun Oil Company's J. Wilburn 3 came in flowing 200 barrels, 30 per cent b.s. and water, when one joint of screen was set at 5379 feet. Mills Bennett Production Company's Gulf-Higgins 1 came in flowing 2250 barrels of pipe line oil daily at 5375 feet. Sinclair Oil & Gas Company's Wilburn 5 began swabbing 1100 barrels daily, with 10 joints of screen set at 5212 feet. Gulf Production Company's J. F. Wilburn 2-A came in flowing 500 barrels, 10 per cent b.s. and water, at 5245 feet. McAlbert Oil Company's Higgins 1 came in flowing 775 barrels daily at 5370 feet.

Independent Association To Meet at Fort Worth

Fort Worth, Texas.—Independent producers from all sections of the country are being invited to attend the two-day convention to be held here April 18 and 19 by the Independent Petroleum Association of America. The meeting is being sponsored by Wirt Franklin, president of the association.

The tariff issue will be the principal topic on the convention program, as the organization proposes to continue its campaign at Washington for a tariff, while matters of general interest to the independent branch of the oil industry will also be considered at the business sessions.

The Fort Worth division of the Independent Petroleum Association of Texas, a branch of the national body, will be host to the visitors, and committees are now being appointed to perfect arrangements for accommodating a large attendance of operators.

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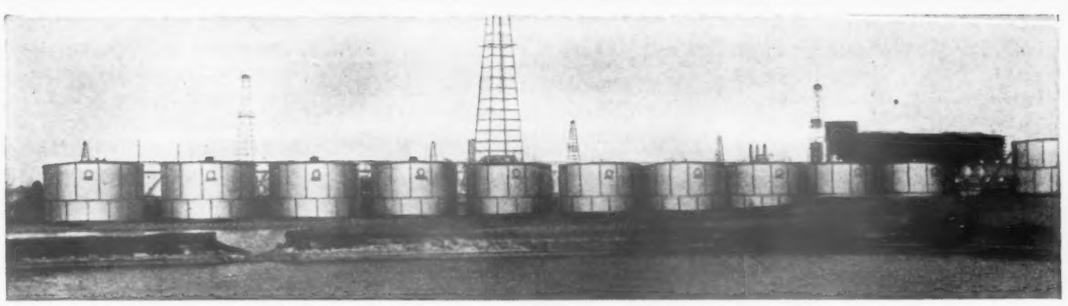

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Hobbs Field Has Ample Line Outlet in Prospect

ARTESIA, New Mexico.—Two eight-inch pipe line connections for the Hobbs field, located in eastern Lea County and near the Texas border, became definitely assured late last week. Officials of Atlantic Pipe Line Company and Humble Pipe Line Company announced March 27 that construction work would start immediately on the laying of extension lines from their respective West Texas pipe line units to give the field an adequate crude market outlet. Two and possibly more lines are contemplated by other crude purchasing and transportation companies for the Hobbs area should tests now drilling in the northwest extension of the field fulfill expectations on flush production, while the first railroad connection will be completed late in April.

The Hobbs field offers the largest potential daily production for any single area in New Mexico, and in recent weeks has taken the lead on new field work with an even dozen tests underway and authorized. Midwest Refining Company established the first oil and gas production in the field late in 1928 with a 700-barrel flowing well on its State lease, and during the following 12 months completions were increased to eight oil wells, having a combined potential flow of about 13,500 barrels daily from the 4200-foot lime horizon. These wells are scattered along the structural high for a distance of 4½ miles, extending in a northwest to southeast direction. The oil produced in this field averages 36 gravity, with a sulphur content. Humble Oil & Refining Company's D. A. Bowers 1, located on the northwest end of the field, is the largest producer in the state, having flowed at rate of 8500 barrels daily when given a six-hour gauge January 25, with about 8,000,000 cubic feet of gas. This well later gauged 732 barrels on three-hour test while flowing through three-inch tubing, with a total depth of 4106 feet. All wells in the field are shut in for storage.

Drastic laws regulating crude purchasing and pipe line companies passed in Texas in March is considered a factor in the Hobbs field and other Lea County areas being provided with adequate market outlets, while the approaching completion of a railroad would permit tank car shipments of crude to distant refining centers. Declining production in Winkler, Crane, Upton and other West Texas counties that have heretofore been important sources of crude has made it imperative that some of the West Texas pipe line companies seek new connections in promising areas such as Lea County offers.

Atlantic Pipe Line Company is to extend its New Mexico line from Midland station and tank farm via the lone wildcat flowing well in Andrews County, Texas, to the heart of the Hobbs field, a distance of about 70 miles. Eight-inch welded pipe will be used in this unit, with only one pump station on the north end contemplated at present. The company will recruit welding gangs to connect the pipe, but will probably contract the ditching. The crude will be purchased by Atlantic Oil Producing Company for the eastern refineries of the Atlantic Refining Company. Atlantic Oil Producing Company has a quarter interest in the Andrews County producer and three nearby drilling tests, and also possesses some acreage in the Hobbs field. However, the company will largely depend upon crude purchases in the Hobbs field to supply the proposed line. Three or more 55,000-barrel steel tanks are to be erected in the Hobbs field by Atlantic Oil Producing Company in advance of completion of the line, so as to fulfill crude contracts now under negotiation.

Humble Pipe Line Company is likely to be the first to complete a line into the Hobbs field, as the company has an eight-inch line connected to a group of producing wells in the Jal field, located in the southeastern part of Lea County. Right-of-way is being purchased to build north from Jal direct to Hobbs, a distance of about 40 miles, with lateral lines reaching out to several wildcat oil producers along the route. No announcement has been made as to whether an active campaign will be waged by Humble Oil & Refining Company for outside crude connections in the Hobbs field. The company is starting a second test on its Bowers property to take care of offsets being started by Ohio Oil Company, Amerada Petroleum Corporation and Geo. F. Getty, Inc. Humble Oil & Refining Company usually purchases oil in all fields served by its pipe line system.

Burford Oil Company is reported to be surveying route for a line to extend from the Hendrick field north into Lea County, and possibly to the Hobbs field. This company has a refinery at Pecos, with a pipe line extending to the Hendrick and Judkins fields.

More Line Prospects

Shell Petroleum Corporation has a shut-in producer rated at 1100 barrels daily in the Hobbs field, and is drilling on two others in the northwest extension. In the event the two drilling tests develop big production, Shell Pipe Line Company is likely to build an extension from Winkler County to the Hobbs field, as the company has two 10-inch trunk lines from McCamey to the Gulf Coast and through the Mid-Continent area to East Chicago. These lines are not adequately protected with crude reserves.

The Texas Pipe Line Company is also a prospective entrant for the Hobbs area, as the company has a six-inch line in operation within 20 miles, with a 10-inch carrier as far north as Jal. Gulf Pipe Line Company may be called upon late in the year to extend its line from Winkler County to the Hobbs field, as Gypsy Oil Company, an affiliate, is in possession of a substantial number of leases, with one direct offset pending.

Landreth Production Corporation and Maljamar Oil & Gas Corporation are moving in materials to drill in southwest quarter of the east one-half SW E½ Section 7-18s-38e, or 2½ miles north of nearest production in the Hobbs area. The former assumed a contract some months ago to drill a free well on this acreage as part payment for the one-half interest. The location is being spotted so as to drill a maximum of six wells to each 80 acres, and other Hobbs field operators are planning to do likewise.

Texas Pacific Coal & Oil Company has started surveying route for a proposed pipe line from its producing property in the Henry pool, Lea County, to Wink, Texas, located in the Hendrick field. The company is negotiating for a long-time crude contract with a West Texas crude purchasing company that has a pipe line terminating at Wink, and is seeking such an outlet because the current crude purchases made by The Texas Company from the Henry pool property are limited to 300 barrels daily, with the balance going to storage in a nearby 55,000-barrel steel tank. Texas Pacific Coal & Oil Company is erecting a 120,000-barrel steel tank on an adjoining site, and is drilling below 500 feet on its State 4. Two completed wells are flowing 900 barrels daily, with State 3 making about 700 barrels daily through one-inch choke, with 600 pounds back pressure.

Tulsa. — Effective April 1, 1930, the name of Shaffer Oil & Refining Company is changed to Deep Rock Oil Corporation, according to an announcement by Standard Gas & Electric Company, which controls the former firm. Approval of the change in name was voted by the stockholders in meeting March 20, according to John L. Gray, vice-president and general manager. Subsidiaries known as Home Oil Company, High Test Oil Corporation and Deep Rock Oil Company, will henceforth be known as Deep Rock Oil Corporation.

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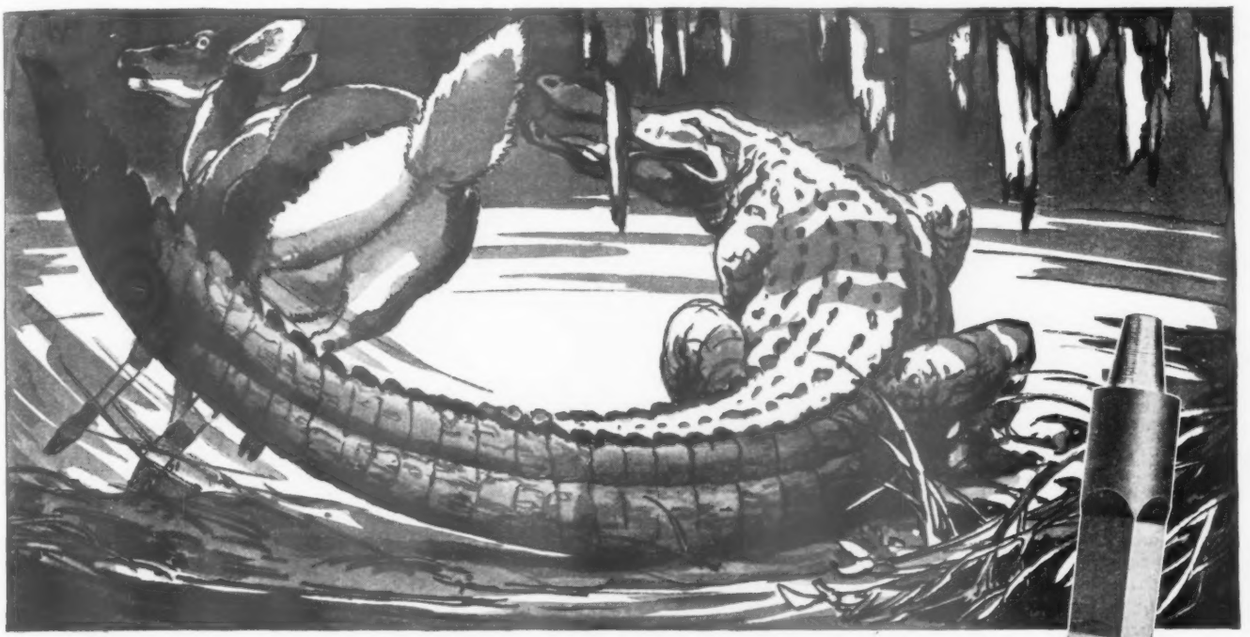

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Gulf Coast Field Developments

JACK LOGAN, *Staff Representative, Houston, Texas*

Refugio Crude Given Price Raise With Gravity Schedule

HOUSTON.—Increased prices for both heavy and light grades of Refugio crude were announced April 1. Effective at seven o'clock on the morning of that date, Humble Oil & Refining Company posted a price of 75 cents per barrel for Refugio heavy crude (below 25 gravity), and applied its new Gulf Coast "B" grade gravity scheduled for the lighter crude produced in that field. According to that schedule the light oil testing 25 to 25.9 gravity is priced at 93 cents, and there is an increase of three cents for each degree of gravity up to $1.32 for 38 to 38.9 gravity; then a two-cent differential up to $1.44 for 44 gravity and above.

Following the announcement of the above schedule, Gulf Coast Pipe Line Company, which operates a pipe line from Refugio to tidewater at Port Aransas, and which is one of the principal crude purchasers at Refugio, announced that it would meet the increased prices announced by Humble Oil & Refining Company. Gulf Coast Pipe Line Company previously had a posted price of 62½ cents for heavy Refugio crude (below 25 gravity), and for Refugio light crude had a schedule of 95 cents per barrel for 30 to 30.9 gravity oil with three-cent differential up to $1.10 per barrel for 35 gravity and above.

Humble Oil & Refining Company at present has some steel storage at Refugio, and has been shipping around 25 tank cars of oil daily out of the field, and is now rushing construction of an eight-inch pipe line to connect with its refinery and tanker loading terminal at Ingleside on the Gulf Coast. That line is expected to be in operation between April 15 and 20.

Gulf Coast Pipe Line Company, which was purchased a little over a month ago by Moody-Seagraves, and which consequently is affiliated with the Union Producing Company, Houston Gulf Gas Company, and Morgan Oil Corporation, producing subsidiaries of the United Gas Company, operates a pipe line system between Refugio and Port Aransas consisting of one eight-inch and one six-inch pipe line, and is moving around 32,000 barrels of oil to tidewater daily, the approximate capacity of the system.

Aside from the pipe line runs from Refugio, large quantities of crude have been shipped out of the field by tank cars. The tank car shipments increased steadily during the first three months of 1930, and by the close of March around 120 cars, or two trains, were being shipped daily. In January total shipments included 1304 cars, with average capacity of about 200 barrels; in February 1951 cars; and during the first 27 days of March there were 2215 cars shipped out. All that traffic was over the Missouri Pacific lines. It was consigned to Toledo, Ohio, Chicago, Roxana, Illinois, and numerous points in Iowa, Wisconsin, and other states in the Middle West. About 10 to 15 cars daily were being shipped to Corpus Christi, Texas, the latter part of March. Purchasing shippers late in March, included Shell Petroleum Corporation, shipping approximately 25 tank cars from Refugio daily; Humble Oil & Refining Company, also shipping out around 25 tank cars daily, largely to the Toledo refinery of Standard Oil Company of Ohio; Independent Oil & Gas Company, 15 to 20 cars daily; Sun Oil Company, approximately 10 cars daily, with that company's refinery at Toledo, Ohio, as the destination; Saxet Oil Company and Union Producing Company, around five cars each daily; and Houston Oil Company shipping around 10 cars of its own production daily and handling other large shipments over its rack. Other shippers included H. H. Cross and Company, Chicago, Ryan Petroleum Corporation, Gulf Coast Pipe Line Company, Gulf States Terminal and Transport Company, Cooper Petroleum Company, Houston, James B. Berry's Sons, Toledo.

Refugio, Texas.—Union Producing Company's Rose Lambert 1-A, second test of a 6500-foot sand on the east side of the Refugio field, has apparently established commercial possibilities of that deep zone.

A 10-foot joint of three-inch screen was set at total depth of 6475 feet to take in sand cored at 6468-72 feet, and when the drilling mud had been bailed down about 300 feet late Tuesday, April 1, the well began cleaning itself. Pressure went up to 1750 pounds, but later declined to about 1250 pounds and the well began to head, producing some oil. Tuesday night the well was still cleaning itself, and the gravity of the oil had not yet been determined.

No tubing was in the well, and it was flowing through 6⅝-inch casing. Because of its great depth and the large size of the pipe through which it was flowing, it was expected to be slow in cleaning itself.

Completion of this well establishes a new record for deep production in the Texas Gulf Coast as well as in the Refugio field. Humphreys Corporation's Kirby 8-A at Barbers Hill, a 6416-foot well, was formerly the deepest producer in Coastal Texas.

Houston Oil Company has the largest tank car rack at Refugio, its capacity being 42 cars. Over that rack it handles the shipments of Shell Petroleum Corporation and various other shippers as well as its own production. During February Houston Oil Company handled 326,000 barrels over its rack. Gulf Coast Pipe Line Company has a 16-car rack at Refugio. Humble Oil & Refining Company has a rack with capacity of five cars; Union Producing Company, five; Saxet Oil Company, six; Independent Oil & Gas Company, an eight-car rack; and Houston Gulf Gas Company a 10-car rack. Sun Oil Company and Shell Petroleum Corporation have been using some cars of their own, but the bulk of the shipments out of Refugio have been in cars leased from tank car companies.

During the week ending March 29 the average daily production at Refugio was 43,950 barrels from 105 wells, all flowing. That figure represents the highest daily production average for any week in the history of the field. By the close of March total oil recovery of the field had slightly exceeded 5,000,000 barrels.

Recent rains slowed up drilling activity somewhat late last week, but there were two new wells completed. Houston Oil Company's Dorsey 1, Town Block 78, which originally tested salt water at 3702 feet, was plugged back to 3695 feet, 8¼-inch casing was set at 3686 feet, and the well came in flowing 450 barrels of pipe line oil daily through a three-eighths-inch

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choke, registering pressure of 250 pounds.

In Fox & Heflin's Fannie Heard 1, which logged oil sand at 3688-3700 feet, 6⅝-inch casing was cemented at 3688 feet, and the well came in flowing 600 barrels of pipe line oil daily through two 3/16-inch chokes, and registered working pressure of 320 pounds. That well was completed about a week ago as a gas producer, but was later worked over and made into an oil well.

Probably the most interesting test now at Refugio is Union Producing Company's Rose Lambert 1-A, which has fair possibilities for completion as the first commercial well of a 6500-foot sand on the east edge of the field. At present the deepest producing well of the Refugio area is Houston Gulf Gas Company's M. F. Lambert 1, which is 5884 feet deep. But that producer is two miles northeast of the nearest production of the Refugio field proper, and is sometimes classed as a separate area. The deepest production of the main Refugio field is from the "O'Brien" sand found around 5500 feet; and Rose Lambert 1-A, the 6500-foot test of Union Producing Company which gives promise of production is approximately 2500 feet northeast of the nearest of those 5500-foot wells, Union Producing Company's Shelton 1, which blew out and ran wild for several weeks.

Rose Lambert 1-A, cored sand bearing gas and oil odor at 6468-72 feet, and has total depth of 6475 feet. Preparatory to testing that deep sand 5-3/16-inch casing has been cemented at 6468 feet, and on April 1 it was reported that the plug would be drilled at once.

This 6500-foot sand was first encountered by Independent Oil & Gas Company in its O'Brien 1. In that well the company tested 20 feet of sand which had strong odor of oil and gas, and it was believed that it would have been commercially productive if it had been highter on structure. Since the present test of Union Producing Company is 10 feet higher structurally than the Independent Oil & Gas Company well, it is considered particularly promising.

Drilling Active

Since the high gravity oil at Refugio commands attractive prices it is the objective of considerable drilling, although found in all cases at depths greater than 5400 feet, and various deep tests are at interesting stages.

Mission Drilling Company of Texas in Moss 1, Block 110, tested salt water with slight oil show at 5480-93 feet, and has plugged back to 5490 feet. The same company has set casing in O'Brien 1, following drill stem test which showed six fourbles of oil, no water, in three minutes; total depth of the hole is 5431 feet, and the oil sand was cored at 5406-27 feet.

Houston Gulf Gas Company's M. F. Lambert 2, an offset to the above mentioned producer two miles northeast of the main field, is drilling gumbo and lime at 4925 feet.

Houston Oil Company's Tom Heard 1, Block 16, which made a disappointing drill stem test at 5101-08 feet, is drilling gumbo at 5224 feet. The same company's Doughty 1, Block 23, is drilling shale and lime at 4865 feet.

Independent Oil & Gas Company's J. F. B. Heard 1-C is drilling sticky shale at 5003 feet. Its Helen Reilly 1, drilled originally to the 3700-foot level, but failing to make a satisfactory producer at that horizon, will be drilled deeper to try for production at 5500 feet. The same company's T. P. Shelly 1 swabbed dry at 5487 feet, and is shut down. Its Mercy Academy 1, which will also be a deep test, is drilling shale at 4207 feet.

Six Refugio wells are producing from the 5500-foot sand, and one mentioned above is producing from 5800 feet. These seven high gravity oil wells have combined daily production of approximately 5000 barrels, and the rest of Refugio production is the heavier oil found at 3700 feet.

There are several wells now nearing completion also in that 3700-foot sand. Over 40 rigs are in operation in the field, and much of the drilling is being done by contractors, who receive around $4 per foot for drilling the shallower wells and $5 per foot for the deep ones.

Humble Enters Humble Field With Four-Inch Pipe Line

HOUSTON. — Humble Pipe Line Company has completed construction of a four-inch oil line between the Humble field, Harris County, and the Humble Oil & Refining Company refinery and shipping center at Baytown on the Houston Ship Channel, a distance of approximately 20 miles. That new line having been built, Humble Oil & Refining Company, effective at seven o'clock on the morning of April 1, has included the Humble field in its posted price for Gulf Coast "B" grade crude, and has extended its gravity scale for this and other newly developed Gulf Coast light oils from the former top of 35 gravity to 44 gravity and above, making the top price $1.44. That new schedule conforms to the present posted price of The Texas Company for Gulf Coast light crude.

Although the new line out of Humble field will be of only four-inch pipe, it will have a relatively high capacity because of its short length.

Although Humble is a salt dome field, and in the past has produced low gravity crudes, principally, its present production of nearly 20,000 barrels daily is almost altogether from newly developed deep flank sands which yield lighter crudes. The gravity of Humble crude in some cases as high as 44.

Humble Oil & Refining Company itself is interested in the development of the new deep sands, and has some producing wells and considerable acreage there, particularly on the south side of the field.

The only new well completed at Humble during the past week was The Texas Company's Koehler 16, a workover, located on the east flank of the field. It came in March 31, and during the first nine hours flowed 400 barrels of 35 gravity pipe line oil, or at the rate of 1080 barrels daily, from total depth of 3070 feet, with 6⅝-inch casing set at 3026 feet.

Probably the most interesting section of the Humble field at present is the west side, where three wells are now down to interesting levels. In that sector Sun Oil Company opened up a prolific new sand on January 28, 1930, bringing in Bender 3 in the Humble townsite for 2000 barrels daily of 31.5 gravity pipe line oil from 45 feet of sand at total depth of 3903 feet. That well is still flowing around 1800 barrels daily.

Sun Oil Company on April 1 was drilling in shale at 4450 feet in Bender 4, which is located 600 feet north and 200 feet west of the above producer. No. 4 is possibly too close in to the dome.

Rio Bravo Oil Company's Fee 1, located on a 22-acre tract at a point about 1250 feet southeast of Sun Oil Company's Bender 3, was drilling on April 1 in sticky shale at 3700 feet.

Showers and Moncrief are drilling a test north of the above two drilling wells, on lot or Block 2, Bender Third Addition, and on April 1 the bit was in brittle shale at 4900 feet.

Benedum-Trees Oil Company is rigging up on Foley 1, which is on a 100-acre tract on the west side of the field. Continental Oil Company's Kattar 1, located in Block 1, Bender Third Addition, is drilling below 3000 feet.

On the northwest flank of the field Southern Drilling & Production Company's Alco 1, located in the John B. Jones Survey, Riverside Subdivision, is drilling shale at 4007 feet.

Various other wells are drilling at Humble on other flanks of the dome. M. La Rue Trustee's Cicero 1, an offset to Humble Oil & Refining Company's Williams 2 on the south side of the field, is drilling sand and shale at 3300 feet. Humble Oil & Refining Company's Williams 11 is drilling sand and shale at 1950 feet. T. P. Lee's Wheeler & Pickens 1 on the southwest flank, is drilling around 1000 feet.

South Texas Petroleum Company's Burt 2 is preparing to test an oil showing at 4750 feet, and is on the east flank. Houtex Production Company's O'Boyle 1 is drilling hard shale at 3817 feet, and its H. Ward 1 on the north side has set 6⅝-inch casing at 4430 feet to test. The Texas Company's House 24, north end of field, is coring sand and shale with oil show at 3597 feet.

New Darst Well Could Produce Three Times Field's Prorated Allowance

SEGUIN, Texas.—Previous records for initial production of wells completed in the Southwest Texas were smashed March 28 when the Magnolia Petroleum Company's M. E. Roamell 1, which is producing from a crevice on the west side of the Darst field, gauged 1620 barrels of clean oil during the first hour, and 1740 barrels during the second hour. This gauge was taken by Umpire H. H. Fitzpatrick to determine the potential production and daily allowance during the first one-half of April, with the flow during the second hour used as the basis of arriving at potential yield. The well is credited with a potential daily flow of 41,760 barrels, or more than triple the actual production allowed in the field from about 100 wells. Upon completion of the official gauge the well was shut in until the new proration period begins April 1, with prospects of earning a production quota of about 2000 barrels daily.

The Darst field prorated area had to be hurriedly enlarged to include the M. E. Roamell tract, as it is located west of the main part of the field and previously considered to be barren of oil possibilities. The unusual performance of the well is due to a cervice condition, or an underground fracture at a point opposite the bend in the fault zone. The well is located in the most northeasterly corner of a 50-acre lease, and was drilled because of lease expiring May 30. Rotary returns were lost at 2317 feet, and at 2322 feet the core barrel dropped about seven feet, thus indicating a cavern. Oil began showing in hole, and further operations were confined to bridging the hole with sacks of shale, cement and rubbish so as to land a string of casing at 2260 feet and cement. Drilling of the cement plug on the afternoon of March 25 was followed by a rush of oil, gauging 782 barrels during first 32 minutes, or at rate of 35,280 barrels daily. This gauge was made through one four-inch line, with 105 pounds back pressure recorded, and into two 500-barrel tanks. The oil tested 40 gravity at 96 temperature, or 36.6 gravity corrected. The well remained shut in until 3:19 p. m. March 28, when the above mentioned official gauge was taken, with the well flowing through two four-inch lines, 70 pounds back pressure, and three 1000-barrel and two 500-barrel tanks connected with the flow lines.

Five new tests are rigging up against this unusual well, including two by the Magnolia Petroleum Company as west and north offsets, while the United North & South Development Company is rigging up rotary on Dix 3 and 4 to take care of the two offsets created by the above company. Gulf Production Company et al are rigging up Dix-McKean 1, a north offset to the big producer, and two more tests are to be drilled on the lease. Gulf Production Company is reported to have acquired a one-half interest in the 20-acre tract for $15,000 cash and three free wells. Successful completion of these five new tests probably hinges on the ability of the drilling crews to hit the crack.

Will Drill Second Test

Since the Simms Oil Company and H. C. Cate's Manford lease has scored two oil producers in crevice to the northeast of the Darst field, the Sun Oil Company and Empire Gas & Fuel Company desire to risk the cost of a second test after drilling a failure on an offset to the Manford discovery well, and are rigging up to drill about 300 feet southeast of their failure. Simms Oil Company and Cate's Manford 1 is flowing 335 barrels oil, plus 14 per cent water, and Manford 3 is flowing 185 barrels oil with some water through tapered tubing daily. Both wells are producing from a crevice, and the water encroachment may indicate that the oil supply is on the wane.

Exclusive of the three producing wells of L. C. Turman, which are not subjected to proration rules, there were 103 pumping and flowing wells at Darst Creek on April 1. Those 103 wells, according to the official proration schedule for the period April 1 to April 15, inclusive, as announced by Umpire H. H. Fitzpatrick, have combined potential production of 203,950 barrels daily. The schedule which went into effect on March 16 included a total of 92 wells with combined potential of 135,014 barrels daily.

Actual production at Darst Creek during the week ending March 29, according to the American Petroleum Institute estimate, was 15,500 barrels daily. That is only slightly above the allowance provided in the proration schedule, and the excess is largely accounted for by the three wells not participating in the proration program. Since the potential production of the field is now over 200,000 barrels daily, the actual production of 15,500 barrels represents only about seven per cent of the potential.

Venezuela Deep Test

Maracaibo.—Latest drilling reports of California Petroleum Exploration Company's Neopod 1 show that the depth is at 7100 feet, making it the deepest well in Venezuela, and the deepest any place drilled with gasoline rotary equipment.

The crew drilling this well includes men with at least five years' drilling experience in Venezuela, at Uramaco and Perija. A. L. Franey is in charge as head driller, and other drillers include Ray Herr and W. (Snowball) Gamble; Gamble has formerly been in the service of this company in Alaska, while Carpenter has served this company in the Philippines.

So far as is known the deepest well hitherto drilled with gasoline equipment was one drilled by Magnolia Petroleum Company in the Mid-Continent, and reached a depth of 4770 feet.

POTENTIAL AND ALLOWABLE PRODUCTION AT DARST CREEK

Totals by companies, taken from official proration schedule for period April 1, through April 15.

Wells participating in the 10,000-barrel nomination of Texas Pipe Line Company and Humble Pipe Line Company.

Producer—	Total wells	No. units	Total potential	Av. Pot'l. per cent	Unit allowance	Potential allowance	Total daily allowance
Abercrombie et al	1	1	1,980	1,980	64	83	147
Empire Gas & Fuel Co.	5	4	7,833	7,269	258	303	559
Gulf Production Company	17	13	38,916	34,241	832	1,431	2,263
Humble Oil & Ref. Co.	21	18	22,564	19,079	1,128	793	1,922
Kirby Petroleum Company	1	1	549	549	64	61	125
Penn Oil Company	1	1	465	465	64	61	125
Stroube & Stroube	1	1	360	360	64	61	125
Sun Oil Company	6	4	13,562	7,547	256	316	572
The Texas Company	28	22	46,525	32,626	1,408	1,461	2,869
Trinity Drillers	4	3	2,324	2,013	192	147	339
United North & South Development Company	6	6	13,104	13,104	384	570	954
Total	91	74	148,182	119,233	4713	5287	10,000

Wells not participating in the 10,000-barrel outlet, prorated on the same fractional figure.

Magnolia Petroleum Co.	12	9	55,768	50,973	576	2,178	2,754
Field Total	103	83	203,950	170,206	5,289	7,465	12,754

Louisiana--Arkansas Field Notes

Cartersville Daily Production Nearly 5,000 Barrels

SHREVEPORT.—Cartersville field of Bossier Parish, Louisiana, with 20 producing wells, has temporarily at least, taken the center of interest in North Louisiana. The daily average production is now near the 5000-barrel mark.

The latest producer in this district is J. C. Tippett and associates' Holmes 1, NE SW Section 36-23-12, which was completed March 30 at a total depth of 3175 feet, flowing 125 barrels by heads in the first 18 hours. The well had broken sand from 3154 to 3164 feet. Six and five-eighths-inch casing was set at a depth of of 3167 feet at which depth it tested five fourbles of oil and four fourbles of mud in 10 minutes in a drill stem test.

Purchase of 827 acres of land in that field by Arkansas Fuel Oil Company, a Cities Service Oil Company subsidiary, from Muslow Oil Company of Shreveport, which discovered the Woodbine producing horizon below 3100 feet in Cartersville, was consummated during last week. Arkansas Fuel Oil Company acquired five producing wells with a daily yield of approximately 1000 barrels and five drilling operations, for $800,000, of which $500,000 was cash. The land transferred includes proven and semi-proven acreage in townships 22 and 23, ranges 11 and 12.

R. O. Roy's Farmer E-1, Section 5-13-13, De Soto Parish, a wildcat test 10 miles from nearest production, completed a fortnight ago flowing 2102 barrels for the first 24 hours through a three-quarter-inch choke, from the Woodbine horizon at 2882 feet with 18 feet of broken sand, for the 24 hours ending at 7 a.m., March 31, had dropped to 1311 barrels. The preceding 24 hours the well had gauged 1360 barrels.

While there has been a flurry of buying and leasing in the vicinity of the Farmer E-1, no one except Roy has made location for any further tests there aside from the Arkansas Fuel Oil Company, which is rigging up for Scott 1, Section 32-14-13. Roy is rigging up Lee 1, Section 33-14-13, and has made a location for another test, R. A. Nelson 1, Section 36-15-13. He already had up a derrick for Farmer B-1 in Section 8-13-13.

Zwolle continued to mark time during the week, although several tests are looking promising for producers in the chalk rock. Benedum & Trees' Bowman-Hicks 3, NE SE Section 34-8-12, reported as completed flowing 1200 barrels daily, is flowing and swabbing about 60 barrels of oil daily. The fact that it made a 50-barrel head before plug was drilled, gave rise to the report that it had been completed flowing 50 barrels an hour. Total depth is 2357 feet in the chalk rock, 6⅝-inch casing having been set at 2339 feet. This well is a western offset to Ohio Oil Company's Bowman-Hicks 1, Section 35-8-12, which is a 45-barrel pumper in the chalk rock. In SW NE of Section 34-8-12 the same company's Sabine Lumber Company 1 is showing oil which is coming up through the plug as preparations are being made to drill in with cable tools. Eight and fourth inch casing was set at 2340 feet.

Show of Salt Water

Benedum and Trees' recently revived Bowman-Hicks A-1, Section 34-8-12, the 12-mile eastern extension well of the Zwolle east field, has begun to show salt water since its revival. The 24-hour gauge for March 28 was a total of 2981 barrels net oil with about 12 per cent salt water.

Believing that the salt water is seeping through from Warner-Quinlan Company's Sabine Lumber Company 1, SW NE Section 34-8-12, which was abandoned after being drilled into the Blossom sand below the chalk rock, the Blossom in Zwolle being notorious for its salt water, operators are now trying to cement off the chalk rock formation in this abandoned hole thereby hoping to stop the salt water showing in the producer.

Long-Bell Lumber Company 1 of A. H. Tarver and the Shreveport-El Dorado Pipe Line Company in SE SW Section 18-8-13, five and a half miles north of the producing area in the older Zwolle field (Blue Lake) is being watched as operators prepare for a drill stem test in a sand formation at a depth of 3398 feet. The largest pay in Zwolle will be below the present pay horizon in the chalk rock formation, is the opinion of H. D. Easton, the geologist who made the locations for the discovery wells in both Zwolle areas and who is more conversant with the field than any one else. Many others hold to the same opinion and watch with interest all tests taken below that horizon.

Three new locations were announced for Zwolle during the week. J. C. McDaniels has derrick pattern for Darby 1, Section 16-8-12, two and a half miles north of production in the east field. E. C. Simmons is rigging up Anderson 1, Section 31-8-12 and in SW NE of the same section Dooley and Howard made location for Williams 1. Although Cartersville had the lead in completions during the week there were no new locations made in that area.

In Section 28-18-6w, Bienville Parish, a rank wildcat area, W. A. Nichols has made location and spudded in McDermott 1. Drilling is under way at 500 feet after 12½-inch casing was set at 98 feet.

Loring Oil Company (Benedum and Trees) is arranging to core Johnson 1, Section 7-11-13, a wildcat in DeSoto Parish, completed several weeks ago as a 12,000,000-foot gasser with a spray of salt water at 2865 feet, the well having gone dead.

The Monroe gas field obtained five new drilling operations during the week, three locations being announced for Ouachita Parish and two for Union Parish.

The regular semi-annual regauge of the Monroe and Richland Parish gas fields has just been completed by the minerals division of the Louisiana Conservation Commission and the total capacity and production are being compiled for the new schedule of withdrawal for the ensuing six months. Total number of gassers gauged, was 984.

Eight Completions in Cartersville

The list of producers completed during recent days in Cartersville besides the Holes 1 of Tippett and associates includes the following: H. L. Hunt and associates' Peyton 4, Section 25-23-12, flowing 300 barrels from 3160 feet, 12 feet of sand; Peyton 6, Section 25-23-12, flowing 600 barrels from a total depth of 3150 feet, with 13 feet of broken sand; Muslow Oil Company's Kilgore B-2, Section 31-23-11, flowing 225 barrels from a depth of 3129 feet, 17 feet of broken sand; Kilgore B-3, same section, flowing 250 barrels at 3148 feet, 16 feet of broken sand; Kilgore C-1, Section 31-23-11, pumping 15 barrels daily from a depth of 3167 feet, being an old well deepened with cable tools; Texas Company's Wilkinson 3, Section 31-23-11, flowing 450 barrels from a depth of 3141 feet with 15 feet of sand; and Wilkinson 4, Section 31-23-11, flowing 825 barrels from a total depth of 3154 feet with 18 feet of broken sand.

Air Lift Oil Company and Bahan and Bahan after drilling to 3180 feet in Mays 1, Section 26-23-12, plugged back to 2970 feet where a drill stem test had shown considerable oil and 10 feet of sand immediately above, and March 31 the well after testing at the higher level was flowing and swabbing at the rate of 150 to 200 barrels daily. Operators announced it would be standardized. This gives Cartersville a higher producing horizon in the Woodbine, the present oil pay zone being below 3100 feet, which is 100 feet below the older gas producing horizon around the 3000-foot level.

One new location was made in rank wildcat territory of East Texas, Harper Byers Oil Company having derrick up for J. C. Laws 1 in the Rogers Survey of Franklin County.

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Wink, Texas
Pampa, Texas
Benavides, Texas

Arrange for Large Attendance At Gas Meeting At New Orleans

NEW ORLEANS.—Plans are being made to take care of an attendance of 1500 at the four-day annual session Western Natural Gas Association, to start here May 5. Rapid expansion of the natural gas industry has been accompanied by rapid developments and new conditions, about which representative speakers will address the gathering. While the meeting is to be known as the Western Natural Gas Convention, it is being sponsored by the Natural Gas Department of the American Gas Association, and it is the twenty-fifth annual meeting of this branch of the industry.

Convention headquarters will be at the Hotel Roosevelt and in charge of E. J. Stephany, of Dallas, Texas, secretary of the Natural Gas Department.

B. J. Mullaney, president of the American Gas Association; Alexander Forward, managing director, and H. C. Morris, of Dallas, chairman of the Natural Gas Department, who will preside at most convention sessions, are on the program to make addresses.

Others who will speak include: E. L. Rawlins, United States Bureau of Mines, Bartlesville, Oklahoma; Dr. J. B. Garner, The Peoples Gas Company, Pittsburgh; W. M. Little, Cities Service Gas Company, Bartlesville; R. M. Redding, Dallas Gas Company, Dallas; R. E. Haas, Columbia Gas & Electric Corporation, New York; E. N. Watkins, Arkansas Natural Gas Corporation, Shreveport; J. H. Dunn, Lone Star Gas Company, Dallas; H. L. Gaibry, New Orleans Public Service, Inc., New Orleans, and George B. Sheppard, United Gas Company, Houston, Texas.

There will be a meeting of the main technical and research committee in the forenoon of the opening day, and that afternoon the managing and advisory committees have been called to meet.

F. M. Rosenkrans, the Gas Service Company, Kansas City; W. J. MacIntyre, Southern Cities Distributing Company, Shreveport, and Miss A. Berry, San Antonio Public Service Company, San Antonio, have consented to speak and present papers on subjects of special interest to commercial departments.

The following committees are in charge of the convention:

Program committee — N. C. McGowen, Louisiana Gas & Fuel Company, Shreveport; H. L. Montgomery, Cities Service Gas Company, Bartlesville, Oklahoma; T. J. Strickler, Kansas City Gas Company, Kansas City; L. Fitzpatrick, Utah Gas & Coke Company, Salt Lake City, Utah; George Wehrle, Public Service Company of Colorado, Denver; W. A. Dunkley, Memphis Power & Light Company, Memphis, Tennessee; A. E. Merchant, New Orleans Public Service, Inc., New Orleans; A. C. Howard, Dixie Gas & Fuel Company, Houston; F. L. Chase, Lone Star Gas Company, Dallas.

Survey for Gas Lines to Serve South Louisiana

Monroe, Louisiana. — Surveys will be started at an early date for the construction of a line to supply natural gas from the Monroe and Richland fields of Northeast Louisiana to 35 towns and cities of South Louisiana, according to A. V. Miller, manager of the Southern Gas Company's line. United Gas Company has formulated plans for furnishing gas to these municipalities, he said.

The line will be approximately 160 miles in length and will cost about $3,000,000. The 160 miles does not include laterals.

The proposed service would utilize a present 18-inch line from here to La Tex, Louisiana, near Shreveport whence the United Gas Company already has an 18-inch line to Orange, Port Arthur and Beaumont, Texas.

The plan, as outlined, calls for tapping the latter line north of Orange and laying a line to the vicinity of Lake Charles, Louisiana, with laterals branching out to various municipalities.

Missouri-Kansas Holdings and Service in Kentucky Extended

CHICAGO. — The Cloverport Gas Company, Cloverport, Breckenridge County, Kentucky, has been purchased by Missouri-Kansas Pipe Line Company. Industrial and domestic gas requirements are to be supplied by Missouri-Kansas Pipe Line Company. Purchase includes transfer of the distribution system and the gas wells owned by Cloverport Gas Company, among whose clients is the Murray Tile Works, which consumes in excess of 500,000 cubic feet of gas per day.

Since the purchase of Wood Oil Company, Owensboro, Kentucky, which included transfer of some 25,000 acres of proven oil and gas land, Missouri-Kansas Pipe Line Company has added the Cloverport utility and recently announced the acquisition by franchise by the City of Greenville, Muhlenberg County, Kentucky, and plans have since been perfected for the piping of Utica, a small community in Daviess County, Kentucky. These new communities increase the total market served or contracted by Missouri-Kansas Pipe Line Company in Kentucky and Indiana to 10.

Missouri-Kansas Pipe Line Company's first sales contract was not obtained in Kentucky until April 19, 1929, but in less than a year this company is serving Owensboro, Henderson, Cloverport, Franklin, Madisonville, Greenville, Hawesville and Utica, Kentucky, and Cannelton and Tell City, Indiana.

Recent purchase of Franklin Gas Company, Franklin, Kentucky, came as a direct result of the acquisition of Wood Oil Company in February, since Franklin will be supplied by wells that were obtained through acquisition of Wood Oil Company.

Cloverport, served by the former Cloverport Gas Company, is a small community of several thousand population about seven miles up the Ohio River from Hawesville, and a line is projected to extend from the main system north-from the Deanfield gas reserve across the Ohio River into the Indiana markets. The plant in Cloverport is an evidence of the permanence of gas supplies in Kentucky, as this community has been supplied with gas during the past 40 years.

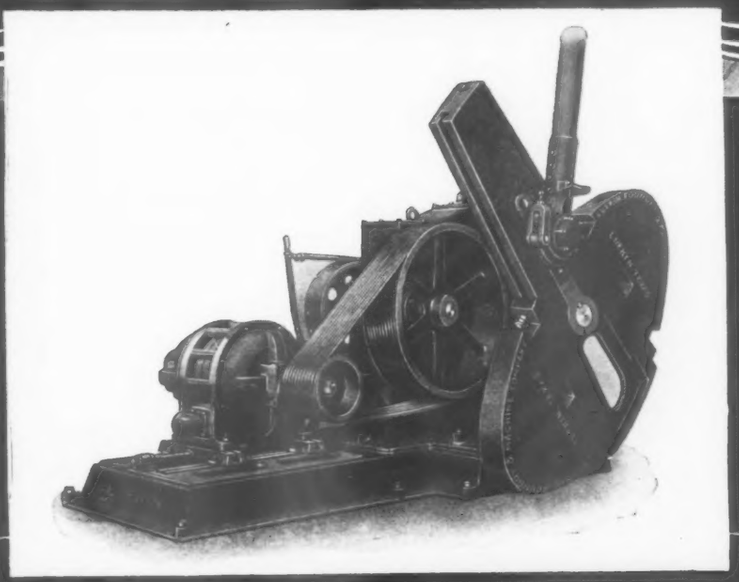
At Franklin, Kentucky, Missouri-Kansas Pipe Line Company plans to complete the installation of meters in homes, then extend the line to wells formerly owned by Wood Oil Company, seven miles distant, which, though few in actual number, produce a total of 20,000,000 cubic feet of natural gas open flow per day.

Another development involves the extension of a line from the Kirkwood Springs gas field to Madisonville. Another important unit will extend from Ohio to Hancock Counties, Kentucky, north across the Ohio River into Indiana. Utica, Kentucky, will be served through an extension of the Owensboro, Kentucky, system, while Franklin will serve as the nucleus for still another unit which later will extend into southern Kentucky.

Abell for United States Chamber of Commerce

New York.—The American Gas Association is sponsoring the nomination of its former president, H. C. Abell, New Orleans, as director of the Chamber of Commerce of the United States, to represent the natural resources production department. Support is also afforded by the National Electric Light Association, American Electric Railway Association, Empire State Gas & Electric Association, and National Electric Wholesalers' Association. Mr. Abell has been an active leader in association work and his activities have been characterized by outstanding achievements.

Gilbert Deschatre was the featured speaker at the weekly luncheon of the Houston Geological Society on April 1. The subject of his talk was "Electrical Correlation of Wells."



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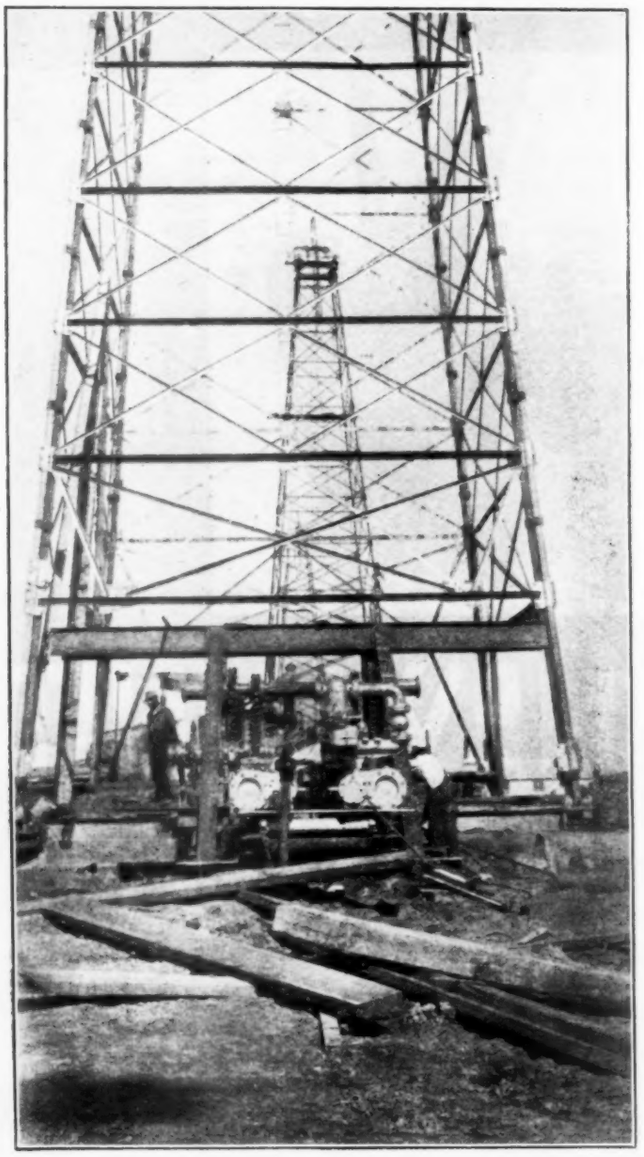

IDEAL AJAX Chosen for this 8500 foot Test Well

THE IDEAL-AJAX 12 x 12 Twin Roller Bearing Engine is here being rigged up to drill a test well to a depth of about 8500 ft., for the Texon Oil Co. of Big Lake.

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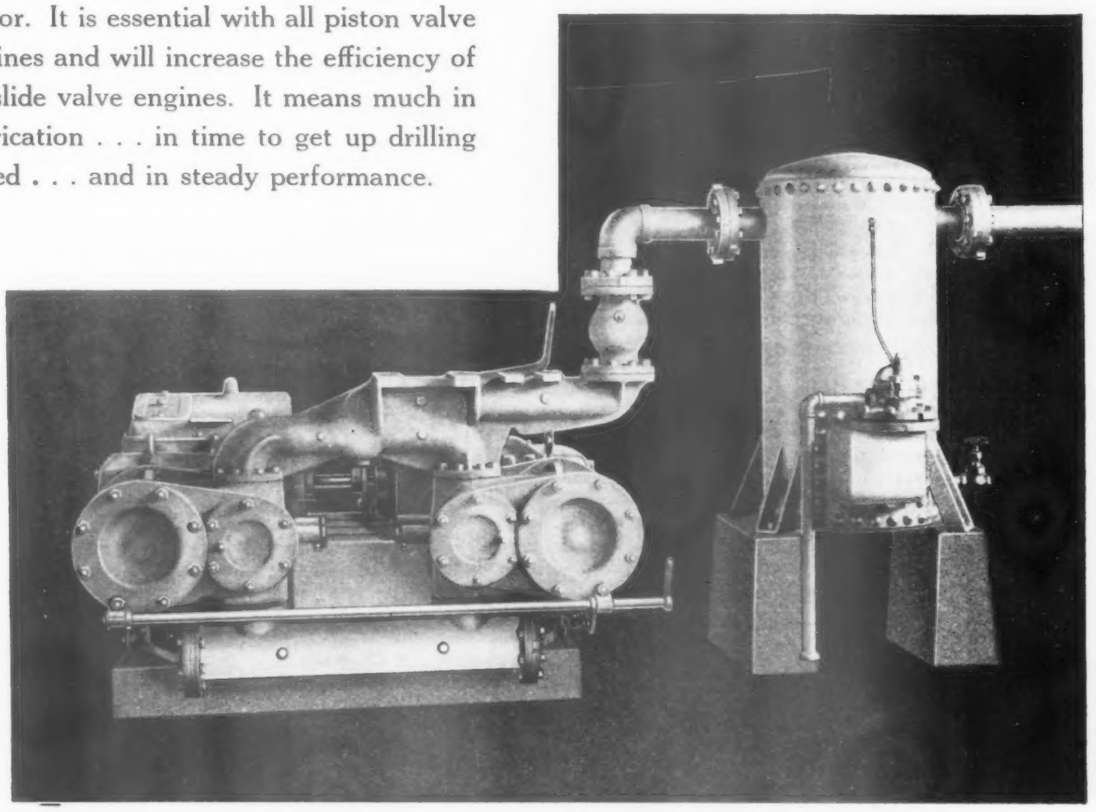

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News From California Fields

BRAD MILLS, ***Staff Representative, Los Angeles, California***

Pending Tests to Determine Deep Campaign At Santa Fe Springs

Los Angeles. — Rapid decline of the Clarke zone at Santa Fe Springs and enforcement of the gas conservation law have placed this troublesome field almost completely under control. Either one of these factors would bring the output down in a hurry, but both, working together, have been very affective.

Interest in field development is following about the same unsteady curve that production has taken, veering sharply downward as small wells are completed. The shifting around to complete wells in any zone which seems to offer best results at the moment is taken to mean that operators are worried over the possibility of paying out on the drilling wells to be completed in the various sands.

Clarke zone completions were disappointing, averaging only 300 barrels and showing evidences of a rapid decline. Most of the edge completions have shown low pressures and little oil. Certain parts of the field are showing an increased quantity of water, particularly on leases which yielded only small wells at the beginning of development in the Clarke zone.

Several very deep tests are being made and the outcome of these efforts to develop still deeper production will be a deciding factor in future drilling below 8500 feet. The Texas Company is coring at 8935 feet in Patterson 10, now the deepest active well in the field. The formation is running to shale and streaks of sand. George F. Getty has reached a depth of 8840 feet in Baker 36, cores showing streaks of oil sand with the shale. Wilshire Oil Company, discoverer of the Buckbee zone, is coring shale at 8810 feet in Baker 4-A. All of these deep tests are expected to test the Hathaway zone, discovered several months ago by Oscar Howard in Hathaway 7.

Active drilling wells total only 70, as compared with almost three times as many at the end of the year. Despite the poor showing of the Clarke zone, most of these wells will be completed in this sand.

Average production of the 275 wells in the Nordstrum, Buckbee, O'Connell and Clarke zones is about 500 barrels. Many wells with a high gas-oil ratio have been shut in entirely.

Since the old shallow zone wells produce little gas, there has been a tendency to increase production from these wells while deep zone producers were being pinched in to save gas. Shallow zone production is just short of 10,000 barrels from about 70 wells.

Second Sand Found in Test Off Rincon Beach

Ventura, California. — General Petroleum Corporation has added another productive zone in Ferguson 1, located on an 1800-foot pier opposite the Rincon field, a test of the water shutoff of the nine-inch casing at 3065 feet having resulted in a flow of 700 barrels of clean oil. The well was drilled to 3110 feet. This is one of the most important wells ever drilled along the Pacific Coast and may be the direct result of an extensive pier drilling campaign. Gas production ran less than 500,000 cubic feet but the gasoline content was about four gallons per 1000 cubic feet.

This is the second productive sand found in Ferguson 1. The well has been killed and will be drilled deeper in search of a still thicker and more productive zone. Many tideland permits have been issued opposite the Rincon field and undoubtedly all will be developed when market conditions improve.

The Rincon field was discovered late in 1927 and a rush to drill very small leases ensued. It was soon found, however, that none of the several thin sands found between 2600 feet and 4000 feet could be depended upon for a large production.

General Petroleum Corporation employed divers in its submarine geologizing of the ocean permit now being drilled and it was found that the main part of the structure lies under water.

Work at Kettleman Hills at Low Ebb

Coalinga, California.—Pending the possible resumption of extensive drilling operations, as the result of inauguration of a systematic program of development now being worked out, field work at Kettleman Hills continues at a low ebb. Several companies were prepared to meet all offset requirements, following the completion two months ago of Petroleum Securities Company's Felix 1, but for several reasons the endless chain of offsets has not started. Market conditions, the fact that the original agreement is still in force and the possibility that edge wells will not be large producers have combined to retard new operations.

The Department of the Interior has recognized the discovery of Bolsa Chica Oil Corporation in Ferguson 1, after about 175 feet of Temblor sand had been cut. This well was drilled to 7690 feet and found the objective sand at the greatest depth of any successful test yet drilled. Located on the southwest flank of the North Dome, Ferguson 1 indicates a sharp dipping of the structure at a point less than one mile from the axis.

Production of the four wells now flowing totals 12,675 barrels. Of the figure Continental Oil Company's Elliott 12-8 is producing 4800 barrels. Milham Exploration Company's Elliott 1, 2850 barrels; Standard Oil Company's No. 8-1-P, 3800 barrels, and Petroleum Securities Company's Felix 1, 1225 barrels. Production of Continental Oil Company's Elliott 12-8 has been reduced to lower gas waste.

Petroleum Securities Company has completed the rebuilding of its gasoline plant which is handling gas from Felix 1, following the recent disastrous explosion which almost completely wrecked it.

California New Wells Far Behind Last Year

Los Angeles.—Total new wells started in California since January 1 stands at 166, as compared with 348 at the same time last year, the decline being one of the sharpest on record. Many factors have combined to reduce the number of permits granted, chief of which are the conservation movement, gas conservation law and the decline of critical fields. Whether the small number of weekly permits will continue to be recorded apparently depends upon the improvement in the industry.

Recover Perfect Cores From Deepest Test

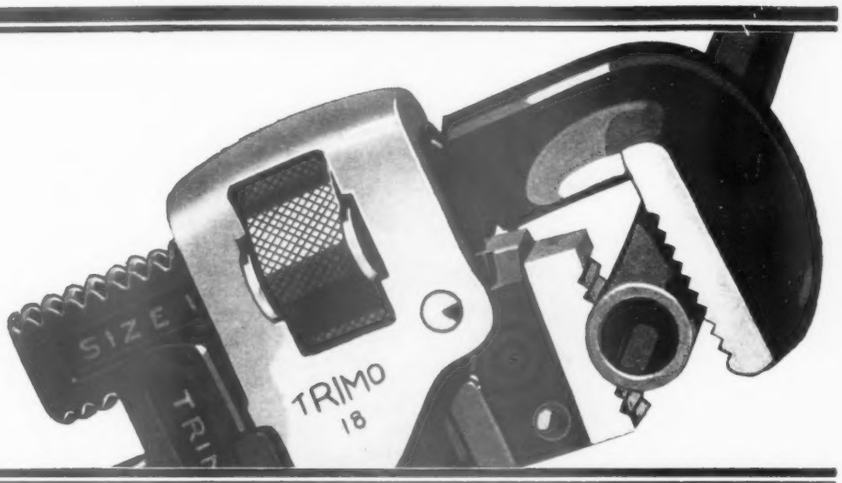
Taft, California.—Standard Oil Company has passed 9500 feet in Mascot 1, a test of the deeper zones in the Midway district. The formation is showing a hard brown shale with occasional streaks of sand. This is the deepest well ever drilled, being 150 feet deeper than Oscar Howard's Hathaway 7 at Santa Fe Springs. Almost perfect cores are being recovered, some of the specimens running almost 20 feet in length.

Venice Being Developed At Rapid Rate

Los Angeles.—Operators are "edging" into the Venice field with as little noise as possible, but the unrestricted area will be developed at a fairly rapid rate, despite overproduction and the possibility that gas waste will be dealt with severely by the state. Several new locations have been made and additional rigs are going up near the discovery well.

Ohio Oil Company, with six active tests, is the busiest operator in the new field. Star Petroleum Company, a late starter,

TRIMO



Year after Year the Men Who Know Stick to the Wrench that *Does Not Break*

PURCHASING TOOLS is not a thing to be learned over night. Years of experience build up the sound sense of values that leads to making the right choice.

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has completed one rig and is building another. Other companies with at least one active location include Barnsdall Oil Company, Burlingham Petroleum Corporation, Duell Petroleum Company, Eaton and Hurst, Featherstone and Preston, and Union Oil Company. The last named is drilling at 200 feet in its first test on a 480-acre lease obtained about two months ago.

Long Beach Takes Lead In California Activity

Long Beach, California. — Long Beach (Signal Hill), greatest of all California fields, has again taken the lead in the number of active operations, with 104 drilling wells and more than 25 rigs which probably will be reflected in the drilling column within a few weeks. The remarkable thickness of the producing zones in this field accounts for the consistency of production and the high average initial production of completions from week to week. In the intensely drilled sectors, the deeper zone is not yielding large producers. It has been found, however, that the southeast flank of the structure is still good for large wells in the deep zone. This has led to active drilling on certain edge leases which were formerly regarded as very small producers. Several good wells have been completed in the upper zones and many tests will be stopped short of 5000 feet. With a combined producing thickness of nearly 4000 feet, the various zones will show only a slow decline over a long period.

North Belridge

Taft, California.—Belridge Oil Company is putting the finishing touches on No. 15, an important deep test in the North Belridge field, preparatory to making a production test of the Temblor sand. The heaviest fittings made have been installed, the Christmas tree assembly being one of the most expensive and elaborate ever used in California. The well was drilled to 5088 feet and if commercial production is developed in the Temblor, an entirely new oil map of this part of the San Joaquin Valley will be necessary. The Lost Hills field should be productive in the deeper zones if the North Belridge field yields a high gravity crude from the Temblor sand, according to leading geologists.

Goleta

Santa Barbara, California.—General Petroleum Corporation has succeeded in shutting in More 2, a wildcat test near Goleta, after the well had blown wild for several days. Production was dry gas and a little oil but the pressure was so high that mudding the hole was a difficult task. The well will be deepened from 4327 feet. More 1, the original test, blew out about a year ago from the same depth, although the gas seemed to be coming from some higher level.

San Bernardino County

Los Angeles.—Western Gulf Oil Company has acquired a 1240-acre tract from the Mahala Oil & Gas Company, the lease lying in San Bernardino County and just across the Orange County line in Sections 13- and 14-3-8. A small cash bonus was paid, plus a one-sixth royalty, drilling to start within six months. Mahala Oil & Gas Company has tried for several years to develop commercial production on this property, having several years ago completed a well which produced at the rate of 300 barrels for a short time. The well declined rapidly, however, and failed to stage a comeback. The leases lie on a line which is the continuation of the strip producing in the Olinda district.

Elwood

Santa Barbara, California. — Barnsdall Oil Company and Rio Grande Oil Company, co-discoverers of the Elwood field, completed two good wells during the week, adding about 6000 barrels to this important district. Bell 17 was completed at 3400 feet with an initial flow of 4000 barrels, with Bell 12 coming in with a production of 2000 barrels from 3435 feet.

Oil produced by Rio Grande Oil Company and Barnsdall Oil Company will be shipped by water to the former's marine terminal at Long Beach harbor and sent by pipe line to Rio Grande Oil Company's Vinvale refinery in the Los Angeles basin. These shipments will run in excess of 750,000 barrels monthly. This crude formerly was shipped to refineries in the San Francisco Bay district.

Mendocino County

Los Angeles.—Reports that Twin State Oil Company had encountered a good oil zone in Soldani 1, a test in Mendocino County, proved to be exaggerated, the showings having been found in the Cretaceous around 2500 feet and not of sufficient importance to warrant a test. Seepages have been noted in this district for years but the source of the oil has not been determined. The well is located on Section 14-12n-17w and is drilling ahead at 2875 feet.

California Gas Waste Injunction Not Yet Fully Effective

(Continued from page 35)

"(12) The amount of gas in each pool in no way determines the amount of settled oil production.

"(13) The amount of gas in each pool in no way determines the amount of total ultimate oil production from the pool.

"(14) The gas lift is a machine apart from the productive zone which is in itself a huge machine. The energy of compressed gas is essential in the successful operation of the lift. Any gas not furnished by the zone can be furnished by an operator's pump to the same effect.

"(15) Gas injection increases the rate of oil production at wells in the vicinity of injection. It holds the wells on 'flush production.' It in no way increases the total ultimate oil production from the pool.

"(16) Gas cannot be stored in a producing zone by means of injection so [illegible] as wells at the crest of the structure [illegible] producing.

"(17) Gas can be effectively stored [illegible] water-sands which overlie the producti[illegible] zones.

"There are the facts as I see them [illegible] Santa Fe Springs. I believe they h[illegible] for all productive zones post-Cretaceo[illegible] in age."

A few engineers disagree with De[illegible] Herold, claiming that from a theoretical standpoint he probably is correct, but from a strictly practical standpoint his theories will not work uniformly at Santa Fe Springs.

Production Down

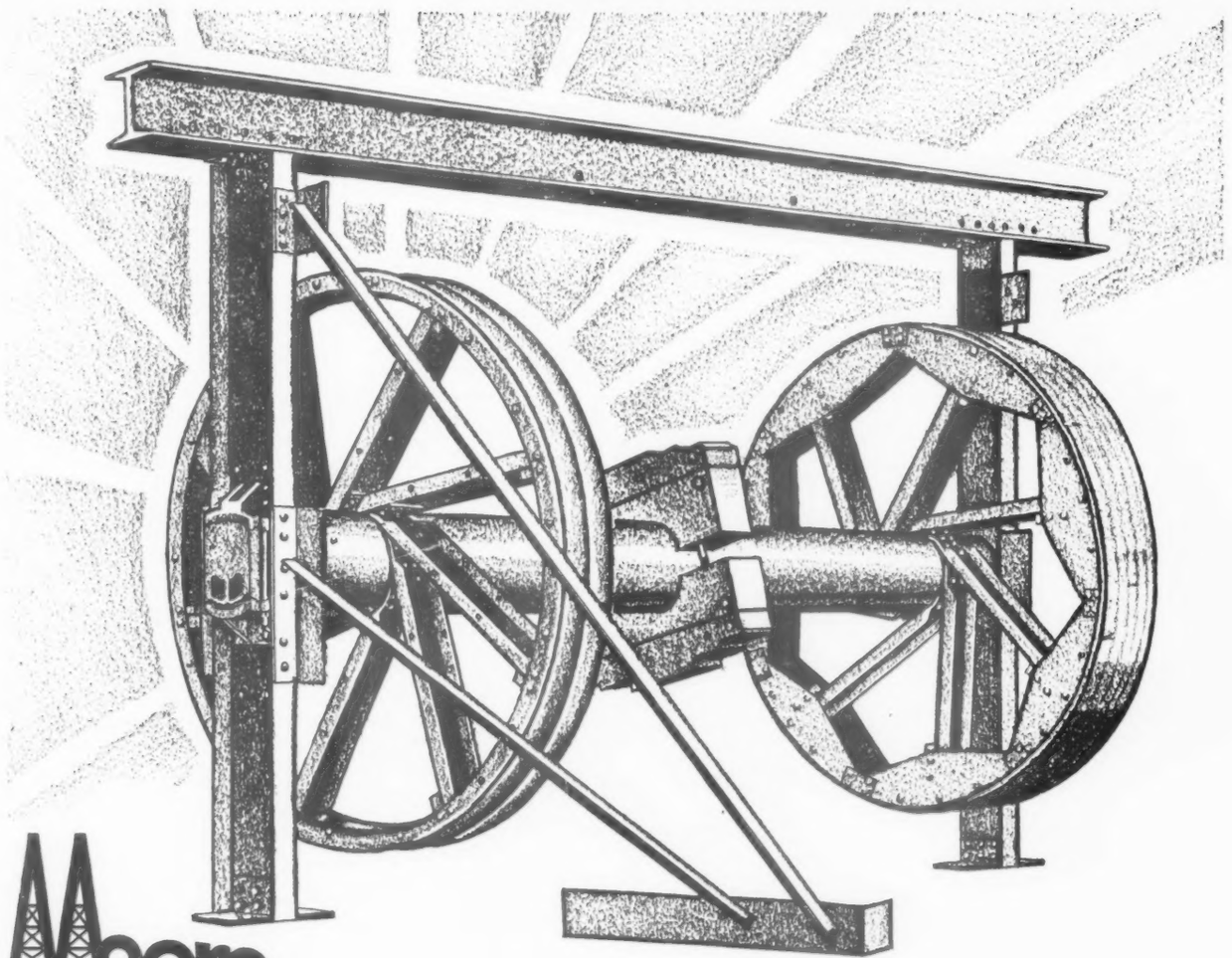
Production has dropped to around 630,000 barrels, with the curtailment program and the gas conservation law working together toward a further reduction. There is little doubt that injunctions will be issued against operators in the Long Beach, Kettleman Hills, Ventura and Elwood fields within the next few months. This action undoubtedly will result in further sharp reduction in the output of light crude. Definite action already has been started against Kettleman Hills and Long Beach operators, the cases to be called early in April.

It is believed in some circles that if light oil is reduced in all of the major fields where gas is being wasted, there will be a shortage of high gravity crude before the end of 1930. Such a development would result in a premium on these light grades and the subsequent opening of heavy oil fields. The opening of heavy fields probably would not result in a much better market for the product, since the demands will be chiefly for the lighter grades. From an economic standpoint, the wisdom of an increased production of heavy oil has been questioned. This would necessitate additional storage facilities for a grade of oil which might not be used for years, according to local economists.

Production at Long Beach is running about 100,000 barrels, new producers and failures to cooperate fully being chiefly responsible for the continued overproduction.

Colorado Wildcat

Denver. — An interesting wildcat well will be the test of Jefferson structure, in Park County, Central Colorado, by South Park Oil Company, recently organized by R. W. Kramer, Frank M. Davis, and J. E. Marmaduke. In this part of the state there are three basins in the mountains, known as North Park, Middle Park and South Park. It was in the North Park, not far from the Wyoming line, that Continental Oil Company developed its carbon dioxide wells where the gas has a temperature of 110 degrees below zero along with high gravity frozen oil. There have been no tests drilled in Middle Park, in Grand County, but there have been some inconclusive ones in South Park. Considerable work has been done geologically in all three districts. Drilling in South Park is to be started in the near future.



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The self-aligning bearings of these steel posts offer important advantages. Because of irregularities in a pipe shaft or deflection in a shaft under heavy load, the wheel trunnion often does not revolve on a true axis. In Moore posts, the bearing is free to align itself with the wheel trunnion, permitting the wheel to turn freely. This arrangement, together with the effective means of lubrication provided, give long life to the bearing surface. The babbitt lining lasts indefinitely. Bearings can be furnished with bronze bushings for extra heavy work.

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Stocks in All Principal Fields

News From Rocky Mountain Fields

Red Coulee Well Makes Favorable Showing

Great Falls, Montaan.—Most important development in the week in Montana was the short production test of the Cosmos Petroleum Company's well in the new border field, Red Coulee, which lies partly in Alberta and partly in Montana. The Cosmos well is on the Montana side of the line. It is estimated that if a complete water shutoff is effected, this well will be good for at least 2000 barrels, one of the best completions ever to be made, outside of the Kevin-Sunburst field, in northern Montana. The oil is coming from a true quartz encountered at 2545 feet, and drilled into some 13 feet. This sand was hit on the evening of March 12, flowed 90 barrels in less than an hour, and was shut down and not opened up again until March 21. There is water in the hole, coming from back of the six-inch casing and the well sands up fast.

The crude is high grade, around 30 degrees Baume; it is believed that there is no longer any question but that it is coming from the true producing sand for this area. Other wells previously completed in the district have not drilled into the horizon, and their production is coming from a sandy porous horizon into which it has been forced from below.

The Monalta Oil Company's well, also on the Montana side, has drilled into production in the Sunburst sand, above the producing horizon for the Cosmos well, and is reported to have 1100 feet of oil standing in the hole. This well is particularly important because it extends the producing area of the new field about a mile to the east. The well is 50 feet higher than the Vanalta Oil Company's discovery well on the Canadian side of the line.

There are two new operations starting up on the Canadian side: the Commonwealth Oils, Ltd., and the Southern Alberta Oil Company, Ltd. Both will be drilling within a week.

Idaho Gas Well Blows Out And Bridges Over

Payette, Idaho.—Idaho-Oregon Petroleum Company has reported that its gas well, but recently drilled in, again blew out a week ago, throwing gas, water, sand and slate some 150 feet into the air for about three hours. The hole then bridged with sand 80 feet off bottom at 1270 feet. The gas is said to be quite wet. This is the second time this well has blown out, the first time being when it drilled itself in and the discovery was made some three weeks ago.

The structure is not far from this town, a mile or so from the Snake River which forms the boundary between Idaho and Oregon. The Oregon short line railroad (Union Pacific) passes directly through the property and within a very short distance of the derrick. A test of the present production will be made, and then the well is to be drilled deeper in the hope of developing oil production.

Colorado Test Abandoned

Denver.—The joint test on the fault block between Iles dome and Thornburg dome, in Moffat County, drilled by Thomas McLaughlin, the Morapos Oil Corporation, Shaffer Oil & Refining Company, and the Joe Miller Drilling Company, is to be abandoned at 4515 feet. It topped the Sundance at 4300 feet and was then 53 feet in the White Cliff formation with water standing within 800 feet of the top. Some shows of oil and gas were reported, but none of any importance. This fault block was tested by the Marland Oil Company three years ago in a well which had several million feet of gas at 3225 feet, and water at 3715 feet. It was not drilled to the Sundance. It was believed that the Marland Oil Company well was too near the fault and drilled through it and found gas.

North Casper Creek

Casper.—All States Oil Company's No. 1 well in the North Casper Creek field, which was completed last year as a very good well and which was then drowned out with water, has been plugged back, filled with cement above the water sand, cleaned out, and is producing about 300 barrels of clean pipe line oil with practically no water. This is the second producing oil well the company has completed on this structure; the No. 3 is pumping about 300 barrels daily, holding up nicely.

Salt Creek

Casper.—Midwest Refining Company is drilling below 4125 feet in its deep test in the Salt Creek field. The bit is passing through the Tensleep sand, and company reports a flow of 2300 barrels of fluid, half of which is oil. The water was expected, and the company is much encouraged not to have found it higher in the sand. There yet remain the Amsden, Madison and Deadwood sands to be tested; largest production is expected in the Madison.

Mahoney Dome

Casper.—The joint test being drilled to the deeper sands on Mahoney Dome by the Producers & Refiners Corporation and the Midwest Refining Company is to be continued deeper, after having made a test of the production obtained in the top of the Tensleep sand. The well produced 75 barrels of oil o na 24-hour test, and 30 barrels on a 12-hour test the next day.

Osage Extension Is Very Active Area

Osage, Wyoming. — Activities in the new extension to the Osage field, Weston County, Wyoming, continue very lively. The Osage Trust Company's well is still producing about 400 barrels in the new part of the field, and the company has located another test to be started soon. The next completion in the field will be the Leonard Smith et al test which was straight-reaming to lower 6⅝-inch casing to bottom at 1710 feet; production is expected at 1900 feet. Three other wells will be drilled, two by Updike interests and one by the Mouser interests.

Plan Another Joint Test At Boundary Butte

Denver.—It is reported here on good authority that Midwest Refining Company and Continental Oil Company are considering the advisability of starting another joint deep test on the Boundary Butte structure in southeastern Utah, Navajo Indian reservation. The first test, believed to be the most expensive ever to have been drilled in the Rocky Mountain States, is stopped short of completion in the objective Pennsylvanian by a string of parted 3¼-inch pipe having been lost, with a string of tools, in the hole. Total depth is 5612 feet.

In the light of the discovery on Rattlesnake structure by Continental Oil Company in the Pennsylvanian it is believed that chances on the Boundary Butte are extremely good.

Cut Bank

Great Falls, Montana.—The Cut Bank area, lying along the same anticline as the newly-discovered Red Coulee field on the international border, is to be the scene of considerable activity this summer, according to present indications. The R. C. Jeffries interests of northern Wyoming, will drill two wells on acreage recently taken over from the Headlight Butte Oil Company. This block is northeast of the discovery well which was drilled by the Drumheller interests on the Yunck farm. Three miles north of the discovery well the Kootenai Oil Company is ready to resume operations on its well which has been standing at 300 feet during the winter.

Great Falls, Montana.—It is reported here that the Sunburst Oil & Refining Company will drill another well on the Bear's Den structure where last year it developed a gas well and a producing oil well, both of which have since been shut in. Sunburst Oil & Refining Company controls most of the valuable acreage on the structure.

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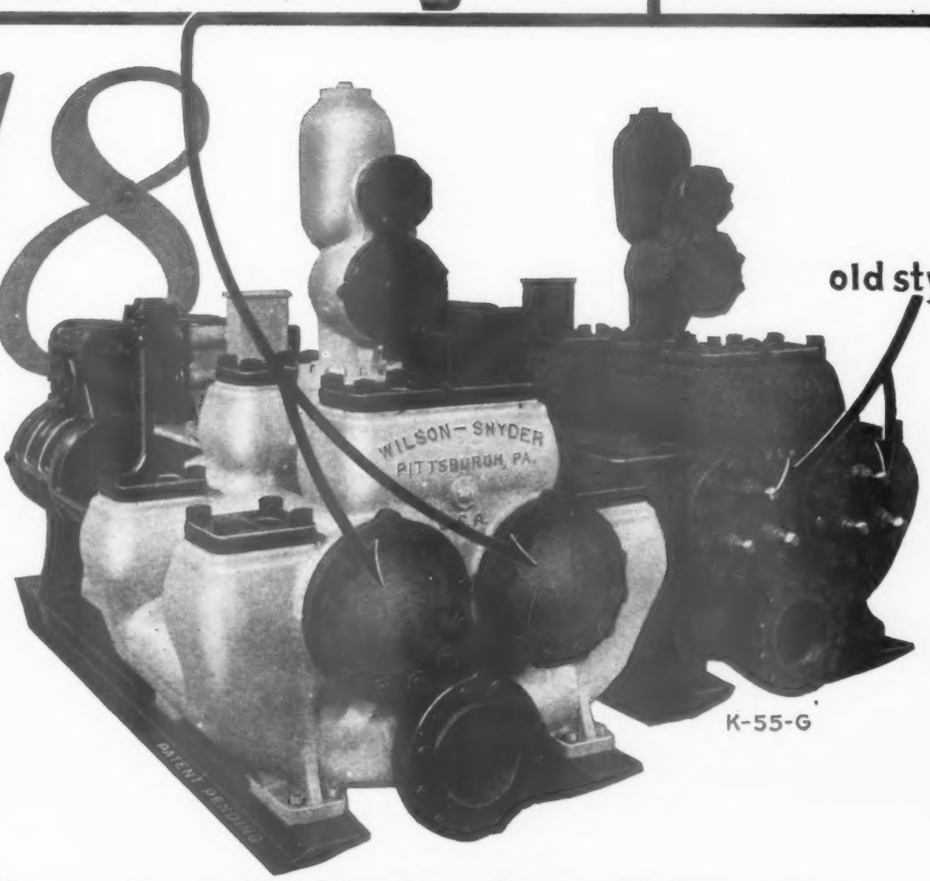

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Deep Sand Developments at Barbers Hill

(Continued from page 30)

the three separate areas on the south, southeast and east flanks previously mentioned. These three areas are all highly productive in the 5100 foot zone, although the most northerly of these three areas has been developed more intensively and has produced more oil than either of the others. The flank acreage between these three areas is being gradually drilled up, following usual Gulf Coast practice. The combined total length of these three productive areas measure 9500 feet and is considered proved for the 5100 foot zone. The width of the producing zone varies from one location on the south to 400 feet in width on the southeast and east flanks. It has not yet been defined along the dome in either direction by dry holes and in only a few instances by salt wells on the side toward the dome. The probable inner boundary of production is indicated in Figure 2 by the approximate 4000 foot salt contour shown on that map. Since only one flank well on the entire dome has reached the salt as low as 4000 feet, it is realized that the contour line used is hypothetical only. Small wells or dry holes have been obtained on the side away from the dome, defining the edge of production of the zone in that direction.

The initial daily production ranges from 600 to 4700 barrels with the average well making initially from 1000 to 2000 barrels. The flowing life of these wells varies greatly according to spacing, drainage, manner of completion and method of flowing. The average well, however, will return the investment cost during its

TABLE 1

Development at Barbers Hill, Sept. 1, 1924-Jan. 31, 1930.

Distillation tests of oil from the 5100 foot zone on the east and the 6400 foot zone on the northwest follow:

(Distillation Tests by Houston Laboratories, January 28, 1930.)

Sample of oil from Humphreys Corporation's Kirby H-1, depth 5071.

Crude Tests:

Gravity	27.3 Deg. A.P.I.
Flash	Room Temp.
Viscosity	61@100 Deg. F.
Water	Saybolt Univ. Trace
Pour Test	-0 Deg.
Color	Dark Green
Sulphur	0.18 Per cent

Tests made on Gasoline:

Gravity	54.0 Deg. A.P.I.
Color	25
Doctor Test	Positive
Initial Boiling Point	122 Deg. F.
Max. Boiling Point	434

Summary of Yields:

Gasoline	7.7 Per cent
Kerosene	5.3 Per cent
Gas Oil	45.9 Per cent
Lubricating Oil	25.0 Per cent
Fuel Oil	15.1 Per cent
Loss	1.0 Per cent
Total	100.0 Per cent

Sample of oil from Humphreys Corporation's Kirby A-8, depth 6416.

Crude Tests:

Gravity	34.2 Deg. A.P.I
Flash	Room Temp.
Viscosity	42@100 Deg. Saybolt Univ.
Water	Trace
Pour Test	-0 Deg.
Color	Dark Green
Sulphur	0.15

Tests Made on Gasoline:

Gravity	55.3 Deg. A.P.I.
Color	25
Doctor Test	Negative
Initial Boiling Point	110 Deg. F.
Max. Boiling Point	434

Summary of Yields:

Gasoline	23.6 Per cent
Gas Oil	45.5 Per cent
Lubricating Oil	15.0 Per cent
Fuel Oil	15.0 Per cent
Loss	0.9 Per cent
Total	100 Per cent

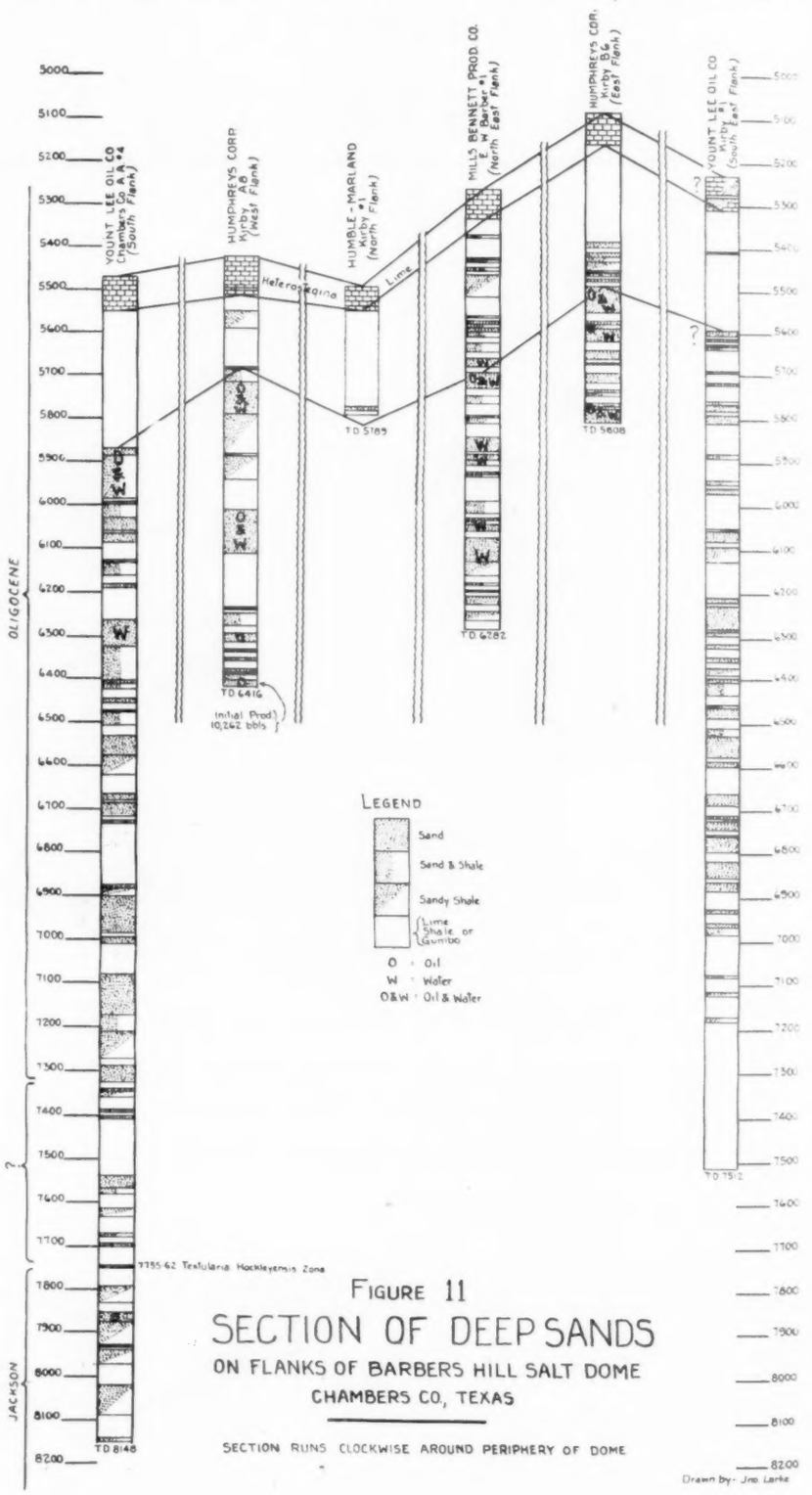
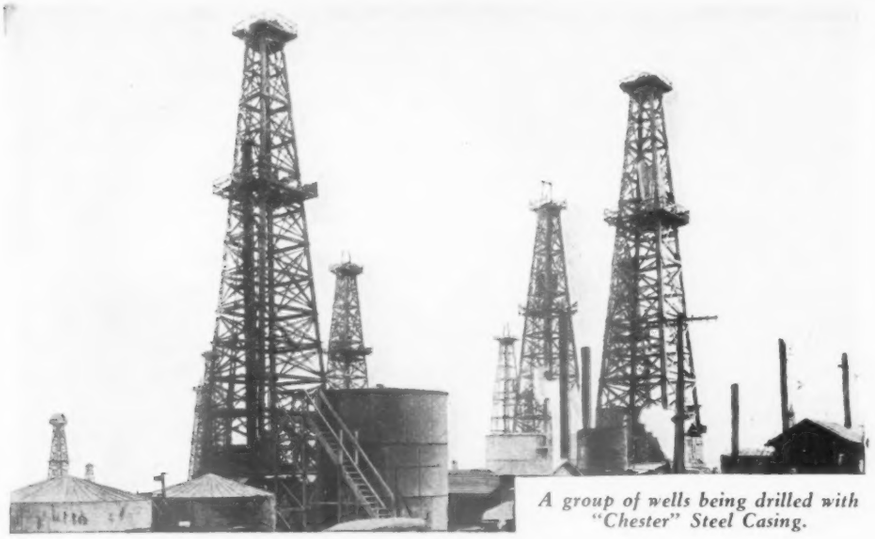


FIGURE 11

SECTION OF DEEP SANDS

ON FLANKS OF BARBERS HILL SALT DOME

CHAMBERS CO, TEXAS



A group of wells being drilled with "Chester" Steel Casing.

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LINE PIPE

flowing period. Several of the best wells have produced to date well above 200,000 barrels each during their flowing life, with occasional wells considerably more. wells settle to pumpers that make from 75 to 300 barrels. The life of these pumpers cannot yet be accurately estimated. The gravity of the oil ranges from 26 to 28 Baaume.

The Humphreys Corporation's Kirby A-8 on the northwest flank has produced 316,500 barrels of oil in the past 39 days from a sand several hundred feet lower in the Oligocene section than the sand which is producing on the opposite flank. It is still flowing 6000 barrels daily at the time this article is written. The production record of the well indicates that this lower sand will be even more prolific than the 5100 foot zone already developed on the south and east flanks.

This crude in common with most other Gulf Coast crudes is desirable on account of its lubricating stock and the anti-knock quality of its gasoline.

For the past few months Barbers Hill has equaled Spindletop in daily production and at the present time is the leading coastal salt dome in production. The daily average production by weeks is platted on the graph shown in Figure 10.

Companies having pipe lines to the field are Liberty Pipe Line Company, Humble Pipe Line Company, Sun Pipe Line Company and Gulf Pipe Line Company. The field is within 12 miles of the Houston ship Channel which is accessible to tankers of nearly every size. Most of the oil is run by pipe line to nearby refineries in the Texas Gulf Coast, or is shipped by tankers to Gulf, Atlantic or foreign ports. There are 13 refineries within a radius of 60 miles, with a combined capacity of 513,500 barrels of oil per day.

Future Development

Twenty-six deep wells are now drilling, 23 of these are on proved locations and three are wildcats. The development of the north, east and south flanks of the dome should proceed in an orderly manner, as leases on acreage are held by a few owners in large tracts. The east flank, however, is in certain portions divided into small tracts with various owners and a rapid development is probable there when deeper flush sands are discovered.

Figure 11 shows formations encountered below the Heterostegina lime in five deep tests on various flanks of the dome.

Yount-Lee Oil Company's Chambers County Agricultural Association 4, on the south flank, Yount-Lee Oil Company's Kirby 1, on the southeast flank and Humphreys Corporation's Kirby A-8 on the northwest flank show a series of alternating thick sands and shales in the Oligocene, extending 1400 feet to 1500 feet below the 5100 foot pay zone. One of these lower sands mentioned has already proved to be prolific, and it is probable that several of the other sands will be productive when found structurally high, close to the dome. The Jackson formation, which is already highly productive on several other salt domes, can be reached by deep wells. The withdrawal of oil from Barbers Hill will be aided in exploratory wells to the deep sands by torsion balance surveys. The development of the directional survey of wells permitting the close determination of the position of the bottom of each hole should reduce the number of dry holes at the dome and allow a minimum number of wells per acre to effectively drain the pay sands. These two items should lessen considerably the cost of removal of the oil. The drilling depth, the large size of wells, the many sand bodies with seeming regularity, the size of tracts and the accessibility by water to a world market point to Barbers Hill as being a consistent large producer for many years.

Mississippi Law Regulates Well Drilling

Jackson, Miss.—Rules and regulations for the drilling of gas and oil wells, regulating the conservation of gas and oil, providing for the supervision of operations and establishing penalties for violations of the rules, are contained in a substitute house bill of the Mississippi legislature now in session.

The statute, which is known as "committee substitute for House bill No. 380," has been passed by a house committee and recommended to the lower house for passage. One member of the committee submitted a minority report, suggesting deletion of Section 2 of the substitute bill, which deals with the proximity with which wells shall be drilled.

Mississippi has heretofore had no drilling or conservation regulations. The new statute would place the authority for issuing drilling permits, etc., in the hands of the director of the Mississippi Geological Survey.

The proposed law would also stipulate that the director of the Mississippi Geological Survey shall, in his discretion, or upon request of five or more fee owners of lease holders within any given gas or oil field, file with the Mississippi Railroad Commission, such additional rules and regulations for drilling for or producing gas or oil as are in effect in gas or oil producing states of similar geographical location or geological location, or those of the United States Geological Survey.

Shreveport.—C. D. Avery of the conservation branch of the United States Geological Survey, Washington, D. C., and C. E. Dobbin of the geological department of the United States Geological Survey, Rocky Mountain division, are in this territory making a land classification of coal and oil lands in Louisiana, Mississippi and Alabama.

They were accompanied to Shreveport by H. J. Duncan, deputy supervisor of the Mid-Continent district of the survey, conservation branch, who is also secretary of the Petroleum Conservation Service.

Reorganize Soviet Oil Industry

In accordance with the statutes ratified by the presidium of the Supreme Economic Council of the U. S. S. R. on January 1, 1930, there has been organized the Soyuzneft (United Oil and Gas Industries), with a capital of 757,000,000 rubles ($388,820,000.)

The Soyuzneft consists of the following, formerly independent oil trusts: Azneft (Azerbaidzhan Oil Trust), Groznefi (Grozny Oil Trust), Embaneft (Emba), Sakhalinneft (Sakhalin), Uralneft (Ural), and Gruzneft (Georgian). These trusts were previously under the supervision of the Chief Mineral Fuels Administration of the S. E. C. The sales of oil products on the internal and foreign markets, which were in the hands of the Naphtha Syndicate, have been taken over by the Soyuzneft and the syndicate liquidated. For the planning and projecting work of the oil industry there had been an institute called the "Giproneft" (State Institute for Designing Oil Refineries, Pipe Lines, etc.), which has also been incorporated in the Soyuzneft.

The Soyuzneft is an independent industrial combine under the supervision of the S. E. C., and has the following divisions: the technical-production division, which deals with the basic problems of production and refining; the sales division, for the sales and supply of oil products on the internal market; the export division, which handles all products designated for export; the economics division; the financial division, etc. A special division has been created for drilling and exploration, and a construction division, the "Neftestroy" (Bureau for the Construction of Refineries, Pipe Lines, etc.), is also part of the combine.

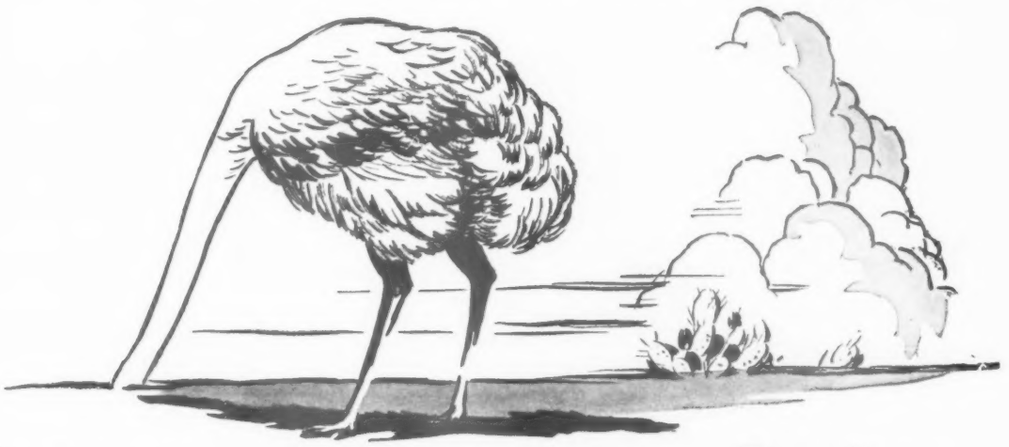
The address of the board of Soyuzneft is Moscow, Myasnitskaya, 20. Its American representatives are the Amtorg Trading Corporation, 261 Fifth Avenue, New York, N. Y.

Tom E. Cranfill Heads New Company

Dallas.—Cranfill & Germany, Inc. has been organized by Tom E. Cranfill and Eugene B. Germany, former president and vice-president, respectively, of the Cranfill-Reynolds Company, and will engage in general lease and drilling activity. Headquarters have been established on the seventh floor Fidelity Union Building, Dallas. N. M. Wilson will have charge of the land department, and Miss Ruby Payne has been elected secretary of the firm. Cranfill is president of the Independent Petroleum Association of Texas.

Dallas.—Removal of general offices of the Cranfill-Reynolds Company, which is now controlled by the Moody-Seagraves interests, from Dallas to Houston was in progress late last week. Headquarters of the Cranfill-Reynolds Pipe Line Company have also been transferred to Houston.

You can't see what goes on beneath the surface–



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COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

SUMMARIZED REVIEW OF FIELD RESULTS

State—	Completions This week	Completions Last week	Producers This week	Producers Last week	Gas Wells This week	Gas Wells Last week	Failures This week	Failures Last week	Initial Prod. This week	Initial Prod. Last week
Arkansas	2	6	1	3	..	..	1	3	4	130
California	25	29	22	26	..	..	3	3	6,625	13,000
Illinois	5	1	3	..	..	..	2	1	43	...
Indiana	1	7	..	3	..	2	1	2	...	90
Kansas	30	41	16	21	1	5	13	15	5,915	8,971
Kentucky	21	12	17	9	..	..	4	3	648	425
Louisiana	21	22	12	14	2	1	7	7	6,472	4,640
Michigan	..	1	..	1	..	..	..	..	...	100
New Mexico	..	2	..	..	..	1	..	1	...	...
New York	11	18	11	15	..	1	..	2	30	96
Ohio	30	34	13	14	12	11	5	9	598	538
Oklahoma	81	89	59	52	5	9	17	28	211,142	107,977
Pennsylvania	80	50	74	45	3	4	3	1	237	311
Texas	138	136	78	71	9	9	51	56	94,108	28,378
West Virginia	12	15	5	3	3	11	4	1	37	100
Total	457	463	311	277	35	54	111	132	324,859	164,756
Increase this week	..	..	34	..	..	..	..	..	160,103	...
Decrease this week	6	..	..	..	19	..	21	..	...	...

OKLAHOMA

Company, Well and Location	Initial Production Bbls.	Depth
CARTER COUNTY—		
Magnolia, Lewis 7, se ne ne 23-1s-3w	190	2404
Magnolia Pet. Co., Spigner 1, se nw nw nw 24-1s-3w	110	2201
Wirt Franklin Pet. Corp., Spigner 1, sw nw nw, 24-1s-3w	200	2480
CREEK COUNTY—		
D. W. Franchot Oil Co., Keifer 33, csl sw, 17-17-12e	5	1468
Texas Pacific Coal and Oil Co., Harjoche 9, ne se ne 21-17-9e	30	2534
Shaffer, Lewis 4, nw sw sw 10-15-8e.	205	3814
HUGHES COUNTY—		
Magnolia, Brown 1, se c ne, 12-9-8e.	*	4359
KIOWA COUNTY—		
Mesa Oil Co., Ditmar 3, ne c se, 18-6-16w	7	335
Parker et al, Fuqua 4, sw c ne, 18-6-16w	12	440
I. D. Flanery, Reneau 1, sw c, 25-6-18w	*	1040
MARSHALL COUNTY—		
Bilbo Oil Trust Co., Null 3, sw c ne nw 24-5s-5e	50	580
F. W. Merrick, Null 14, nw c se nw 24-5s-5e	110	610
Bilbo Oil Trust Co., Taliaferro 8, sw c ne se 14-5s-5e	*	638
MUSKOGEE COUNTY—		
Midwestern O&G Co., Phillips 1, c sw nw 31-12-19e	¶3	657
E. B. Grubbs et al, Robins 1, nw c sw ne, 26-15-16e	*	2315
R. H. Kimsey, Crittenden la, cel sw ne 5-14-19e	*	587
OKFUSKEE COUNTY—		
Twin State Oil Co., Crumme 1, sw c ne, 32-12-10e	¶18	3087
Transcontinental Oil Co., Smith 1 ne nw sw, 10-12-11e	45	3537
Mitchell Oil Co., Randall 11, nw c ne,, 30-12-12e	15	1668
Shell et al, Hopping 1, ne c se, 21-12-11e	100	3460
Champlin O&R, Washington 8, nw ne se, 15-11-11e	25	3521
Riverland Oil Co., et al, Blackman la, nw c sw sw 33-11-11e	*	3786
OKLAHOMA COUNTY—		
I.T.I.O. Co., et al, Fortson-Farley 3, se ne ne, 24-11-3w	30,500	6470
Fortson 2, sw se ne 24-11-3w	6728	6478
Coline Oil Co., Olds 5, nw ne nw 24-11-3w	3038	6435
I.T.I.O. Co., et al Pasedena Heights 1, nw se se 14-11-3w	11,964	6406
Thomas-Fuzzell 3, ne se se 13-11-3w	30,960	6460
Wirt Franklin Pet. Corp., Lowrey 6, sw nw nw, 12-11-3w	12,678	6490
I. T. I. O. Co., et al Theimen 1, sw c ne, 12-11-3w	18,000	6296
Butterfield 1, se ne ne, 11-11-3w	6528	6493
Wirt Franklin Pet. Corp., et al, Theimer 1, se c, 2-11-3w	15,792	6494
I. T. I. O. Co., et al, Jones Community 1, sw c 1-11-3w	9888	6460
Jones 4, ne se nw, 31-11-2w	3908	6448
Sinclair O. & G. Co., Vencl 1, nw c se, 31-11-2w	14,005	6548
Vencl 2, ne nw se, 31-11-2w	3860	6526
Coline Oil Co., Warren 4, sw nw sw 18-11-2w	23,244	6492
I. T. I. O. Co., et al, S. Bodine 3, sw nw nw 30-11-2w	1656	6438
OKMULGEE COUNTY—		
Sheridan Oil Co., Bruner 1, ne sw nw, 24-15-11e	10	2231
D. M. Logan, Clarkson 1, cwl ne sw, 32-15-13e	¶5	2108
J. E. Wallace, Colbert 12, se c nw ne 14-14-14e	25	1106
C. D. Burns, Anderson 16, nw c ne, 35-14-14e	30	1153
W. B. Pine, Burgess 1, (owdd) ne c sw sw 17-12-13e	58	2973
OSAGE COUNTY—		
Winona Oil Co., 11, sw se ne, 20-29-9e	35	1568
Peters Pet. Co., 7, csl nw, 32-24-9e.	20	1615
Union Oil & Mining Co., 3, csl nw, 32-23-10e	25	2545
Peter Adamson Jr., 1, se c nw, 5-21-9e	15	1605
PAWNEE COUNTY—		
Foster Petroleum Co., Little 9, ne sw nw 6-20-8e	90	2751
Hoss et al, Russell 1, se c nw, 29-20-9e	*	2840
PAYNE COUNTY—		
Mulberry Oil Co., Sharrum 6, sw nw nw, 5-17-4e	1090	4164
Home Gas Co., Benson 3, ne c sw nw, 1-18-5e	*	3594
PONTOTOC COUNTY—		
Dixie Oil Co., Haynes 2, ne nw sw, 32-5-5e	120	2525
Benedum and Trees, Bullard 2, nw se nw, 31-5-5e	70	2677
Tidal Oil Co., et al, Ralls 1, ne c se, 28-5-8e	*	3525
POTTAWATOMIE COUNTY—		
Barrett, Brown and Carnahan, Town-lot 1, nw se nw 8-9-5e	975	4380
Sinclair, Brandenburg 4, nw sw sw, 7-7-5e	135	4040
Independent, Mid-Kansas O. & G., Weldfelt 4, nw c, 2-7-4e	270	3837
Magnolia, Jordan 1, ne sw se, 12-7-4e	100	4130
W. B. Pine, Smith 3, ne sw ne, 8-8-5e abandoned rig	*	....
SEMINOLE COUNTY—		
Sinclair, Davis 1, "B", se ne sw 7-6-8e	*	4232
Lippa Drilling Co., Tulsey 1, ne c, 31-9-6e	*	4...
Mid-Continent Pet. Corp., Harjoche 1, se nw se, 8-6-6e	*	3...
Harjoche 2, ne sw se, 8-6-6e	*	3...
Harjoche 3, se sw se, 8-6-6e	*	3...
Twin State Oil Co., Harjo 1, ne sw sw, 8-6-6e	*	4...
Carter Oil Co., Spillman 4, sw c, 7-6-8e	1610	4...
Pure, Strothers 11, "A" (owdd) nw c sw 26-9-6e	475	4...
Amerada & Dixie, Fullerton 3, sw ne se 19-9-6e	2695	4...
Gypsy, Willie 4, se nw ne, 24-7-6e	1705	4...
Willie 3, ne nw ne, 24-7-6e	1655	4...
Empire, Sachemeche 3, se nw sw, 9-6-6e	688	2...
Independent, Okfuskee 1, nw sw nw, 16-6-6e	¶28-97	2...
McCulloch Oil Co., Robert 1, nw c, 16-6-6e	770	2...
Sinclair, Johnson 1, ne se nw, 17-6-6e	770	2...
The Texas Co., Atkinson 1, ne nw ne 17-6-6e	1900	2...
Hilton Philips et al, Hyde 1, se c ne, 20-6-6e	1685	3...
SEQUOYAH COUNTY—		
Western Oklahoma Gas Co., Barnes 1, ne sw ne, 33-11-25e	¶1...	3...
STEPHENS COUNTY—		
Magnolia, Kagay 27, sw nw sw, 34-1s-8w	66	1...
Ven Mex Oil Co., and Mid-Continent Oil Co., Burke 5, nw c ne, 34-1s-8w	100	2...
Dunmar Oil Co., Randle 2, sw c, 10-2s-6w	¶53	2...
George Pace et al, Wilson 1, nw c sw nw ne, 20-2s-7w	25	1...
WAGONER COUNTY—		
Hale-Ford Oil Co., Brown 5, sw c se nw, 36-16-17e	*	9...

KANSAS

Company, Well and Location	Initial Production Bbls.	Depth
BUTLER COUNTY—		
Empire, Houston 19, nw ne sw, 19-26-5e	30	2672
Kookler 95, nw sw nw, 20-26-5e	75	2610
Cranston 12, ne c se 22-27-5e	100	2773
CHAUTAUQUA COUNTY—		
Croft et al, Anderson 1, nw c se, 16-35-11e	*	1012
COFFEY COUNTY—		
Shaffer, Levering 1, sw c, 7-23-15e	*	1650
ELK COUNTY—		
Blemming et al, Shrader 1, nw c, 16-29-9e	100	2659
GREENWOOD COUNTY—		
Gore and Phillips Pet. Co., Blanck 2, nw sw se, 29-22-13e	30	1714
Empire, Edwards 6, "B" ne se se 21-23-11e	135	1944
Patterson 3, "C" ne sw se, 36-23-11e	600	1817
Marshall et al, Bonnett 9, se sw nw, 13-24-12e	25	1730
Bonnett 10, cwl sw nw, 13-24-12e.	120	1739
Lassen et al, Wilkinson 7, se ne sw, 6-25-9e	175	2215
Simmons and Rhodes, Patterson 3, nw sw sw, 22-23-11e	530	1991
Mid Kansas O. & G. Co., Adams 1, ne c sw, 15-27-13e	*	1483
MARION COUNTY—		
Phillips Pet. Co., Rumold 1, se ne nw, 10-17-4e	*	3155
McPHERSON COUNTY—		
Shell, Ritz 4, se sw sw, 1-20-2w	*	3015
McCulloch Oil Co., Cornelson 1, sw c, 7-21-4w	*	4025
Shell, Koehn 1, se sw sw, 36-19-2w	335	2972
I. T. I. O. Co., Voshell 1, ne c nw, 9-21-3w	835	3382
Voshell 4, nw c, 10-21-3w	825	3447

(Continued on page 82)

Star "C Type" Spudders

Are Ideal for Using Separate Power Units
GASOLINE — DIESEL — ELECTRIC — STEAM

Star Spudders are now built in three sizes, with capacities of 1000, 1500 and 2000 feet. Each size is available in the following 3 types:

(1) C Type Star Spudder uses either tractor or skid type engine. (2) Non-tractor, same as C type except engine is mounted on machine frame. (3) Super-Tractor Star Spudder (illustrated below) has crawler wheels for moving machine under its own power.

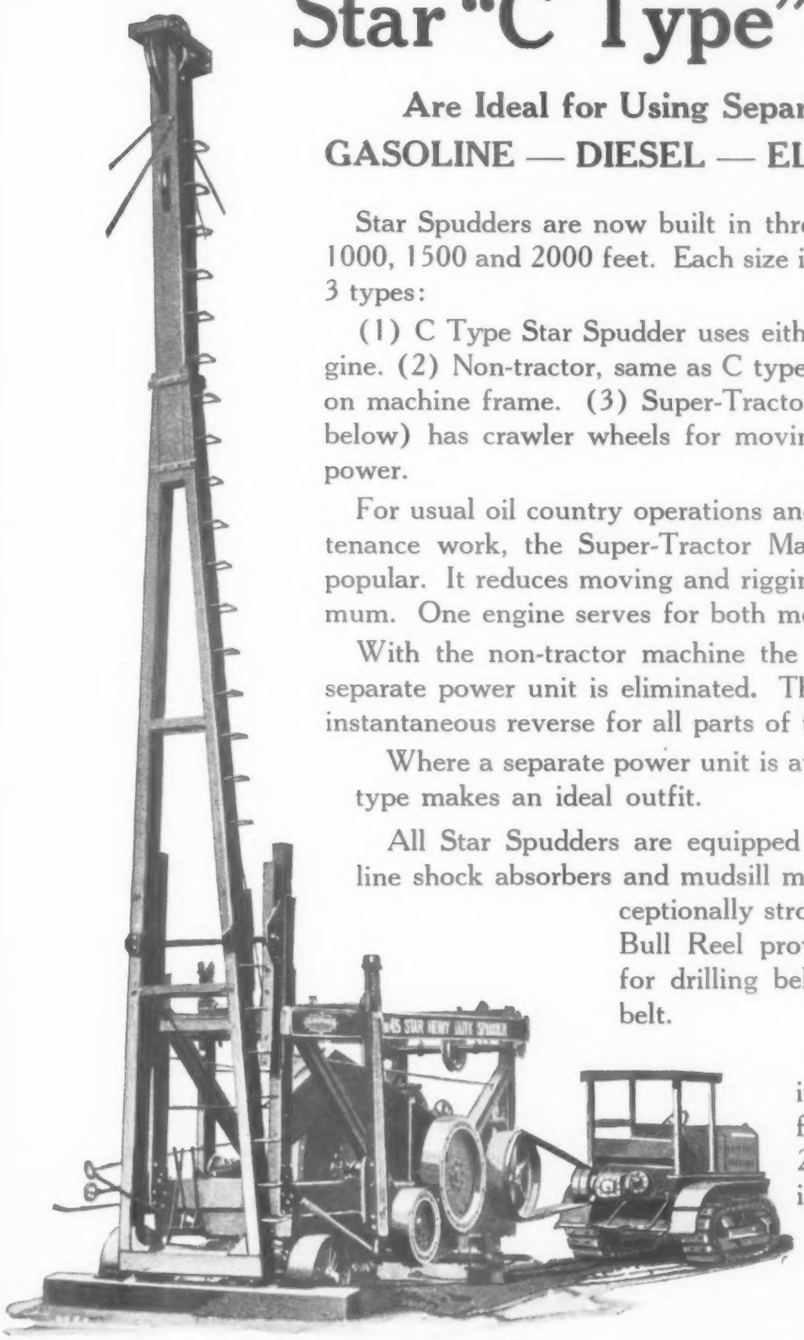
For usual oil country operations and especially on lease maintenance work, the Super-Tractor Machine is by far the most popular. It reduces moving and rigging up expense to the minimum. One engine serves for both moving and drilling.

With the non-tractor machine the rigging up expense for a separate power unit is eliminated. The engine also provides an instantaneous reverse for all parts of the machine.

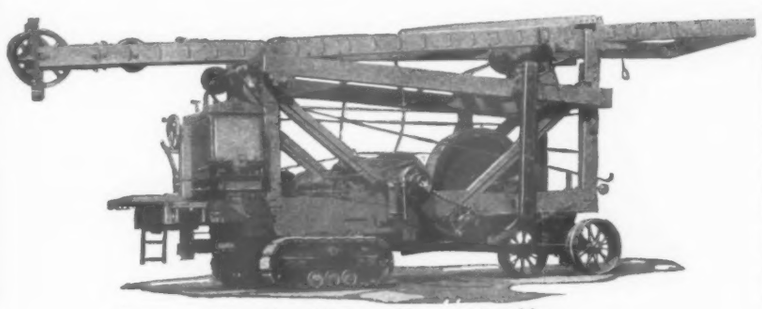
Where a separate power unit is available or preferred, the C type makes an ideal outfit.

All Star Spudders are equipped with the latest type wire line shock absorbers and mudsill mast, which provides an exceptionally strong mast for heavy pulling. Bull Reel provides ample storage space for drilling belt without spooling under belt.

These and many other improved Star features are fully described in Bulletin 21B. Send the coupon for it today.



Star No. 45 "C Type" Spudder



Star No. 45 Super-Tractor Spudder

STAR DRILLING MACHINE CO.,
Akron, Ohio.

Without obligation, please send a copy of Bulletin 21B describing Star Spudders for new drilling. Depth ..... cleaning-out depth .....

Name .....

Address .....

.....

O.W. 4-4-30

Company, Well and Location	Initial Production Bbls.	Depth
RICE COUNTY—		
Vickers Pet. Corp., Binger 1, nw c se, 21-20-10w	1700	3324
SEDGWICK COUNTY—		
Shell, Lygrisse 1, "D", se c nw, 15-26-2e	300	3188
SUMNER COUNTY—		
Derby Oil Co., Norris 1, nw c, 35-34-2e	¶8¼	2783
WOODSON COUNTY—		
O. K. O. Oil Co., Otto 2, ne nw nw, 21-23-14e	*	1650
Young et al, Opperman 1, sw c ne, 27-23-14e	*	1660
Skelly Oil Co., Trust Co. 1, ne c se, 17-24-14e	*	1710
Curtis et al, Fry 2, c sw se, 22-25-14e	*	1576
Peerless O. & R., Lauber 12, cnl ne ne, 23-26-14e	*	1305
Skelly Oil Co., Daniels 1, ne c sw, 13-26-14e	*	1290
Underwood et al, Simpson 1, se c sw, 35-23-14e	*	1660

CALIFORNIA

ELWOOD—		
Bankline Oil Co., Bell 89-2	250	3340
KERN FRONT—		
Chanslor-Canfield Midway Oil Co., Fee 32	25	2085
LONG BEACH—		
Hancock Oil Co., No 26	250	4875
A. N. Macrate, No. 1	160	7130
Shell Oil Co., Stakemiller 7	1200	5565
The State Co., Midland 2	160	6440
MARICOPA FLATS—		
Standard Oil Co., Fee 5-9K, 9-11-23	550	3763
ROUND MOUNTAIN—		
Shell Oil Co., Freeman 7, 20-28-29	200	1640
SANTA FE SPRINGS—		
Associated Oil Co., Green 3	500	7875
Bandini Pet. Corp., Off 11	50	6730
Off 14	275	7910
Dabney-Johnson Oil Corp., No. 40	40	6085
General Pet. Corp., No. 161-C	40	6600
No. 185-E	200	8000
No. 240	250	8000
Richfield Oil Co., Howard 4	200	8050
St. Helens Pet. Co., Hill 1	100	6800
Standard Oil Co., Walker 21	100	7830
Walker 22	75	7831
The Texas Co., Foster 1-5	50	7350
Union Oil Co., Howard 15	150	4130
Wilshire Annex Oil Co., Koontz 5-A.	800	7950

EASTERN STATES

NORTHWESTERN OHIO

HARDIN COUNTY—		
The Kemrow Co., Sites, 1	40	1441
SENECA COUNTY—		
Kansas Oil & Gas Co., Dillon, 2	40	1402
McLEAN COUNTY—		
Penn-Indiana Oil Co., Tippin, 1	*	....
McCREARY COUNTY—		
Bain & Hogue, Phipps, 2	5	....
WARREN COUNTY—		
Shriver & Co., Phillips, 1	1	1160
Ortman & Grimsley, Davis, 3	*	485
DAVIESS COUNTY—		
Evans & Garrison, Clark, 2	25	1446
E. E. Thomas & Co., Ward, 1	*	....
HENDERSON COUNTY—		
Niagara Oil & Gas Co., Jetter, 2	60	707
Southern Oil Producing Co., Farley, 4	20	....
Imperial Oil & Gas Products Co., Barrett, 1	*	2185
OHIO COUNTY—		
Cumberland Petroleum Co., Wade, 7	125	....
Hupp, Duff & Co., Dawson, 1	250	....
Dr. Sirman Co., Farmer, 23	50	....
Leeper Oil Co., Greer 1	50	....
J. C. Ellis & Co., T. Howard, 8	15	....
LAWRENCE-JOHNSON COUNTIES—		
Boston-Southwestern Oil & Gas Co., Sparks, 24	3	....
Swiss Oil Corp., Holbrook, 51	15	....
Swiss Oil Corp., Holbrook, 60	10	....
Swiss Oil Corp., Lyons, 36	10	....
JOHNSON-MAGOFFIN COUNTIES—		
Hupp, Duff & Co., Frazier, 9	10	....
Hamlin-Tanner Oil Co., Tackett, 6	5	....
Wagner & Matthews, Fairchilds Hrs. 4	4	....

SOUTHEASTERN OHIO

WASHINGTON COUNTY—		
Thos. McVey & Co., Burnett, 5	15	....
Kesselring Oil Co., Kesselring Hrs., 1	2	....
MONROE COUNTY—		
Wittmer Oil & Gas Co., Knowlton 1	¶¼	2045
Chas. Standt & Co., Wilbeck-Claus, 13	¶½	1169
MORGAN COUNTY—		
Ohio Fuel Gas Co., Hammond 1,	*	....
NOBLE COUNTY—		
Local Oil Co., Cleveland, 2	¶¼	1703

CENTRAL OHIO

MUSKINGUM COUNTY—		
The Atha Co., Bryan, 1	50	3190
Wittmer Properties, Trustee, Chaplin, 1	50	4064
Ohio Fuel Gas Co., Varner, 1	160	3179
Craig, Adair & Co., Cox, 1	¶1½	....
PERRY COUNTY—		
McGinnist Merical, Woods & Sagel, 1	50	....
Perry Sturm & Co., Petty, 3	50	3010
Ohio Fuel Gas Co., Moore, 1, ¶½ & 23		3549
Ohio Fuel Gas Co., Smith, 1	*	2884
ASHLAND COUNTY—		
Ohio Fuel Gas Co., Shriver, 2	¶1½	....
Robinson & Co., Moffett, 3	3	821
LORAIN COUNTY—		
Ohio Fuel Gas Co., Dewhurst, 1	¶2	....
Dempsey & McGrath, Pitts, 1	¶1¼	....
SUMMITT COUNTY—		
F. A. Brendall & Co., Dunn, 2	¶2½	3965
Stolz Oil & Gas Corp., Selzer, 2	¶½	3517
HOLMES COUNTY—		
East Ohio Gas Co., Gamble, 1	¶¾	3445
The Preston Oil Co., Close, 5	*	....
HOCKING COUNTY—		
Ohio Fuel Gas Co., Sunday Creek Coal 74	¶¼-85	3395
GUERNSEY COUNTY—		
North Salem Oil & Gas Co., Baird, 1	30	3682
KNOX COUNTY—		
Ohio Fuel Gas Co., Walton, 1	¶1¼	....
STARK COUNTY—		
F. A. Brendall & Co., Smith, 2	¶2¾	4008
RICHLAND COUNTY—		
Ohio Fuel Gas Co., Oakes, 1	*	....
ATHENS COUNTY—		
Fox & Mosure, Bean, 6	*	....

NEW YORK

ALLEGHENEY COUNTY—		
Sadie Sawyer, Sawyer, 9	4	....
J. M. DeDivitt & Co., Fee, 17	4	....
N. V. V. Franchot, Franchot 36	3	....
Mary Lippert, Lippert, 32	3	....
E. A. Wilson & Co., Wilson, 5	3	....
Forest Oil Corp., Fee, (4 wells)	8	....
W. E. & P. W. Burdick, Kinley Oil 6	3	....
Joseph Sutter, Sutter, 2	2	....

WEST VIRGINIA

CALHOUN COUNTY—		
L. P. Bickle, Stump Mrs 2	*	....
W. H. Bickel, Elliott, 1	*	....
F. F. McIntosh, Dushey, 2	¶1¼	....
Hope Natural Gas Co., Hoffman, 7431	¶2	....
ROANE COUNTY—		
United Fuel Gas Co., Hart, 1	15	....
Federal Oil & Gas Co., Newman & Co., 40	*	....
KANAWHA COUNTY—		
Virginian Gasoline & Oil Co., Nichols, 7	10	....
MONONGALIA COUNTY—		
Philadelphia Gas Co., Moore, 4	6	....
DODDRIDGE COUNTY—		
Hope Construction & Refg. Co., Spencer, 20	4	....
RITCHIE COUNTY—		
Hannagan & Hanlon, Weekly, 1	2	....
HARRISON COUNTY—		
Hope Construction & Refg. Co., Nuzbam 1	¶½	....
TYLER COUNTY—		
Warden & Co., Taylor, 1	*	....

INDIANA

MONROE COUNTY—		
Petroleum Exploration & Ohio Oil, Young Hrs, 1	*	2102

ILLINOIS

Company, Well and Location	Initial Production Bbls.	Dep
CRAWFORD COUNTY—		
Warner-Caldwell Oil & Gas Co., Furman, 9	1	11
ST. CLAIR COUNTY—		
Hageman & Welden, Eckert, 1	22	7
Ellis & Thomas, Pittman, 1	*	6
E. R. Collins & Co., Engloke, 1	*	6
Ohio Oil Co., Reichert, 2	20	7

PENNSYLVANIA

BRADFORD FIELD—		
South Penn Oil Co., Bingham 499 tr 67	2	....
Weston Jr., 65	2	....
Fee, 112	2	....
Whipple, 154	2	....
Jones, 276	3	....
Forest Oil Corp., Fee, (4 wells)	8	....
Forest Pet. Corp., (7 wells)	14	....
Hawkins Oil Corp., (3 wells) Fee	6	....
Bradford Producing Co., Weston Jr. (3 wells)	6	....
Niagra Oil Corp., Fee, (35 wells)	70	....
Lawton (1 well(	30	....
D. J. Moody, Moody, 35	3	....
Moody, 36	5	....
A. L. & M. L. Lilly, Lilly, 32	4	....
Middaugh, 24	12	....
P. E. Kahle, Barton, 1	¶¼	....
R. O. Landers & Co., Landers, 26	4	....
Hazlewood Oil Co., Fee, 116	2	....
Barry & Givin, Barry Estate, 5	5	....
Penn Pet. Co., Duke, 5	3	....
Jetter & Co., Duke-Taggart, 10	2	....
C. E. Potter, Potter, 13	4	....
N. V. V. Franchot, Rounds, 25	22	....
E. M. Parks Est, Parks, 7	5	....
Gibson Oil Co., Bingham, 4	3	....
Lane & Co., Bingham 371 tr 63	2	....
J. & R. M. George, Bingham 411 tr 40	3	....
BUTLER COUNTY—		
Guy Sutton, Byers, 17	2	....
H. J. Crawford, Seigel, 1	2	....
Frederick & Co., Montag, 1	2	....
VENANGO-CLARION COUNTIES—		
Pioneer Oil Co., Columbia, 14	2	....
Heeter, Potts & Co., Markle, 2	3	....
Grim & Jenkins, P. C. L. Co., 47	2	....
Klinger Bros., Klinger, 1	*	....
GREENE COUNTY—		
Natural Gas Co. of W. Va., Clutter 1	¶1	....
Peoples Nat. Gas Co., Keeger Hrs, 3521	*	....
ALLEGHNEY COUNTY—		
R. D. Porter, Harriott, 1	.1	....
WASHINGTON COUNTY—		
Carnegie Nat. Gas Co., Sarden 1	*	....

ARKANSAS

UNION COUNTY—			
Lion O. R. Co., Murphy J-10, 17-16-15	4	2528	

NORTH LOUISIANA

CADDO PARISH—			
Bayou State Oil Corp., Barr 2, 30-22-15	25	1101	
Falcon Oil Co., Nunnelly 2, 29-20-15	*	1985	
OUACHITA PARISH—			
Sho-Van Gas Prod. Co., West Virginia 3, 8-18-4e	¶¾	2201	
G. E. Jordan, Anding 1, 18-18-5e	sw	2480	
RICHLAND PARISH—			
Louisiana Gas & Fuel Co., Chapman 1, 36-16-6e	sw	2493	
Louisiana Gas & Fuel Co., Sartor C-1, 21-16-6e	20½	2440	
SABINE PARISH (Pleasant Hill)—			
Arkansas Fuel Oil Co., Horns 4, 33-10-12	150	3229	

SOUTH LOUISIANA

EDGERLY—		
Rex Pet. Co., Hunter 11	*	4070
LOCKPORT—		
Vacuum-Gulf, Bordages 8	*	4400
PORT BARRE—		
The Texas Co., Botany Bay Fee 5	1500	3406
SORRENTO—		
Gulf, United Lds. Co. 17	*	4300

Illustrated above is one step in the making of a Halliburton Cement Mixer in the company's shops.

In oil well cementing s-p-e-e-d is the indispensable factor, the essential "ingredient." When Halliburton entered the field no mixing method was fast enough to provide the SAFETY factor desired. Accordingly, an entirely new principle of cement mixing was devised—a type of mixer which provides not only the fastest known method of mixing cement and water but one which introduces a new degree of mixing *efficiency*. The Halliburton mixer is used only in the Halliburton Process.

HALLIBURTON
OIL WELL CEMENTING CO.
Duncan, Oklahoma

To keep abreast of drilling methods, it is necessary to keep abreast of cementing developments. THE CEMENTER—filled with interesting information—will be sent gratis as issued on receipt of the coupon.

Halliburton Oil Well Cementing Co.,
Dept. OW, Duncan, Okla.
Without cost or obligation, please place my name on the list to receive THE CEMENTER regularly as issued.

Name .....

Company .....

Address .....

TEXAS

TEXAS GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
BARBERS HILL—		
Mills Bennett, Gulf-Higgins 1	2250	5375
Sinclair, Wilburn 5	1100	5215
McAlbert Oil Co., Higgins 1	775	5370
Gulf, Wilburn A-2	450	5250
BATSON—		
East Batson Oil Co., Bates 9	*	1150
CLODINE—		
Gulf, Brazos Valley Irrig. Co. 1, Jno. Frederick sur, Fort Bend County	*	6065
ESPERSON DOME—		
Cranfill - Reynolds Co., Esperson 8-A	1800	3293
HULL—		
Ocean Springs Oil Co., Palmer 1	*	2080
PIERCE JUNCTION—		
Superior Oil Co., Whitehead A-3	15	4230
Navarro Oil Co., Tex-Ex. 18	1200	4830
PETTUS—		
Morgan Oil Corp., Ray 1, Bee Co.	*	4450
SOUR LAKE—		
M. E. Peveto, Merchant 1	20	1410
H. M. Terry, Lucett Moore 1	40	800
SPINDLE TOP—		
Yount-Lee Oil Co., McFadden 126	1260	4890
Gladys 99	*	5070
SOUTH LIBERTY—		
Sun, Mitchell 7, dd	85	3420
REFUGIO—		
Houston Oil Co., Shelton 1, Blk 100	416	3683
Hotel 1, Blk. 48, wo	500	3696
Independent O&G Co., Claud Heard 3	1400	3696
Korona Oil Co., Zarsky 1, Blk 91	700	3696
Morgan Oil Corp., Fox Hrs. 1, Blk. 70	500	3701
Rooke 1, 114.5 ac. tr.	*	5924
Carlisle 1, Blk. 2	¶50	5470
Pearson Properties, Ryals 1,	1160	5482
The Texas Co., Shelton 1	*	6050

SOUTHWEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
BEXAR COUNTY—		
Swearingen Oil Co., Fee 1, Dobrowolski pool	7	710
CALDWELL COUNTY—		
Cranfill-Reynolds, Strawn 1	15	1710
Strawn 2	10	1801
DUVAL COUNTY—		
Buckner et al, Peters 1	¶15	1703
DARST CREEK—		
Cranfill-Reynolds Co., Appling 2	450	2450
Empire G. & F. Co., Knoblock 1	6500	2590
Henry Willie 1	400	2639
Humble, Denman 11-A	750	2632
Denman 12-A	800	2590
D. D. Baker 1	1300	2602
The Texas Co., Knoblock 3-A	2580	2514
Knoblock 4-A	1080	2544
W. R. Posey 3	1080	2619
H. Willie 5	228	2621
D. Wilson 6	1350	2609
Magnolia, M. E. Roamel 1	41,760	2322

TEXAS PANHANDLE

Company, Well and Location	Initial Production Bbls.	Depth
GRAY COUNTY—		
Champlin Ref. Co. & Danciger, Cook-Faulkner 6	¶20-2650	2865
Danciger O&R Co., M. Davidson 1	25	3177
Magnolia Pet. Co., J. E. Wright 4	900	2853
McIlroy Oil Co., Arnold 1	125	3225
Tripplehorn Oil Co., Morse 1	180	2808
HUTCHINSON COUNTY—		
Barnsdall Oil Co., Pritchard 4-A	180	2892
Gulf Prod. Co., W. E. Herring 1	¶11½	2877
WHEELER COUNTY—		
Martin & Debous, Close 4	¶39	1560
Murchison-Fain-McGaha, Close 8	¶20	1860

NORTH TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
ARCHER COUNTY—		
L. T. Burns et al, Wilson 1-Q	*	1500
Douglas Oil Co., McClure 7	50	1306
Golding & Cochran, Harmel 4	*	1462
Goldsmith & King Royalty Co., Kunkel 10	65	1157
W. B. Hamilton et al, Pace 1	4	1248
Harry Hines et al, Jackson 1	*	1505
M. & V. Oil Co., Kunkel 4	20	1162
J. J. Moran et al, Herron 1	*	888
Paul B. Scott et al, Farmer 1	30	1466
The Texas Co., Wright 1	25	1455
W. C. Young et al, Threet 2	*	1307
BAYLOR COUNTY—		
Looney & Hutchinson, Young-Murrell 1	*	1501
CLAY COUNTY—		
Saxet Oil Co., Stine 2-J	*	1851
COOKE COUNTY—		
Lloyd Oil Corp., Wheelock 9,	3	1321
C. J. Mellen et al, Able 1	*	1514
FANNIN COUNTY—		
Erwin Prod. Co., Darling 1	*	1300
GRAYSON COUNTY—		
FHE Oil Co., Henderson 1	*	1060
Groves & Ruwalt, Bishop 1	*	1002
MONTAGUE COUNTY—		
Bridwell Oil Co., Dennis 2	*	1965
W. H. Godfrey et al, Lemon 1	30	906
THROCKMORTON COUNTY—		
L. V. Ulrey et al, Keichan 1	*	932
WICHITA COUNTY—		
Arkansas Fuel Oil Co., K&K 28-A	130	1770
WILBARGER COUNTY—		
Atlantic Oil Prod. Co., Sigler-Waggoner 10	85	2710
McCarty Oil Co., Waggoner 1	90	1841
Moore et al, Waggoner 1	*	2702
The Texas Co., Waggoner 23-E	20	2423
Waggoner Ref. Co., Waggoner 1-P	110	2681
Waggoner 8-P	120	2680
Zenith Oil Co., Dill 2	45	2198
YOUNG COUNTY—		
Christie Bros. et al, Kisinger 2	260	2543
Coleman & Shaw, Wilson 1	*	1045
W. R. Cooper et al, Hardy 1	*	703
I. M. Dunn et al, Doyle 1	*	1150
Halmack Oil Co., et al, Carpenter 1	45	905
T. F. Hunter et al, Taack 1	*	1203
E. B. Madden et al, Winkler 1-A	*	1312
Nix & Dale, Daniel 1	30	886
Panhandle Ref. Co., Jimerson 1	*	900
E. R. Riggs & Kleiner, Hardy 1	*	728
Riner & Omohundro, E. C. Keith 1	20	670
Shaw Oil Corp., Kisinger 2-A	410	2554
Carl Wainwright et al, Garvey 2	*	791

CENTRAL WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
BROWN COUNTY—		
Atlantic & Pacific Oil Corp., McClanahan 1	*	1204
Baker Bros. et al, Hall 2	*	527
Bush et al, Roberts 1	*	1438
E. L. Smith Oil Co., George 19	20	1329
CALLAHAN COUNTY—		
Gibson & Johnson, Jackson 3	*	1042
McDonald 1	*	1501
Mook-Texas Oil Co., Johnson 4	15	1631
Prairie O&G Co., West 1	*	1250
Shaheen et al, Alvord 1	*	502
COLEMAN COUNTY—		
Amerada Pet. Corp., Forman 1	*	1660
Arcadia Ref. Co., Kingsberry 1	*	1718
Jameson-Pollard et al, Lynch 1	*	1950
Lloyd Oil Corp., Bartholomew 7	50	1433
Permian Oil Co., Reeves 2	*	786
Potomac Pet. Co., McAdams 2	*	981
Tidal Oil Co., Stewardson 4	20	1457
Whitfield et al, Sealy-Smith 2	*	3220
EASTLAND COUNTY—		
C. E. Delaney et al, Harbin 1	*	940
Hyer & Gulf Prod. Co., Patterson 1	¶4½	3336
SHACKELFORD COUNTY—		
Campbell Oil Co., Bowman 1	*	1612
Douglas & Earl, Walker 1	*	745
Gibson & Johnson, Simpson 2	*	1914

WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
CROCKETT COUNTY—		
Empire Gas & Fuel Co., Shannon 1	20	2660
ECTOR COUNTY—		
Cosden Oil Co., University 2-B	†	830
GLASSCOCK COUNTY—		
Continental Oil Co., H. Phillips 1	800	2312
HOWARD COUNTY—		
American-Maracaibo Co., Settles 4-A	100	2261
California Co., Roberts 11, Lse. 2	150	3011
PECOS COUNTY—		
Amerada Pet. Corp., University 1-B	180	1550
Dixie Oil Co., Toborg 3	250	440
Shell Pet. Corp., Smith 12	350	1572
Smith 2-B	440	1777
University 1-D	120	1647
Skelly Oil Co., University-Bowser 2	600	981

CENTRAL EAST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
VAN ZANDT COUNTY—		
Pure Oil Co., A. D. Clark 1	300	2880
A. R. Tunnell 1	2500	2898
Shell Pet. Corp., I. P. Tunnell 3	5000	2902
The Texas Co., R. A. Tunnell 1	3000	2881
R. V. White 1	2500	2990

EAST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
PANOLA COUNTY—		
Bahan & Bahan, Tom Hill 1, Mitcheson sur	¶¾	2327
D. Thomason, J. M. Trosper 5, Jane Tharpe sur	¶1	2370

Cartersville Acreage Changes Hands

Shreveport.—Purchase of the entire acreage of the Muslow Oil Company of Shreveport, in the Cartersville oil field of Bossier Parish, Louisiana, by the Arkansas Fuel Oil Company, a subsidiary of the Arkansas Natural Gas Corporation, one of the Doherty group, was announced here by the purchasing company, March 28. The consideration was not disclosed but was reported in oil circles to have been over $800,000, of which $500,000 was cash.

The acreage purchased includes 827 acres in the proven and semi-proven parts of the field. Included in the sale are five producing wells with a combined daily average yield of 1000 barrels, two tests in the sand, and three other drilling tests. The tracts are located in townships 22 and 23 north, ranges 11 and 12 west.

While no definite program of development was announced by the purchaser, it was stated that "a vigorous development program is planned." Arkansas Fuel Company already had one producer in the field, Bolinger 1, Section 38-23-11.

Muslow Oil Company discovered the oil production in Cartersville in the Woodbine horizon below 3100 feet last fall when it completed Kilgore A-1, Section 31-23-11 at 3164 feet, flowing 218 barrels. There are now 19 producing wells in the area with a combined daily yield approximating 5000 barrels. The oil is from 43 to 44 gravity.

S. L. Herold, Shreveport capitalist and attorney, is president and treasurer of the Muslow Company and Eugene Harding is secretary. Several other major companies had been negotiating for the holdings.

Abilene, Texas.—Approximately 36 field superintendents, engineers and lease foremen engaged by The Texas Company in Central and West Texas districts and Southeastern New Mexico assembled here March 24 for a bi-annual conference, with L. E. Barrows, division manager of the Fort Worth office, presiding. C. B. Williams, assistant division manager, and D. O. Bayless, superintendent of the land and lease department, both of Fort Worth, assisted in conducting the meeting.

Denver.—A wildcat deep test of great importance is the Indian Territory Illuminating Oil Company and Osage Development Company's joint venture on the Ft. Morgan anticline which has spudded in, prepared to drill at least 5000 feet, and possibly 7000.

PERMITS GRANTED FOR NEW WELLS

	Week ending Mar. 29	Previous week	Total this month	Total this year	This week 1929	This month 1929	1929 Year Total
Arkansas	2	2	9	29	..	14	159
California	11	5	63	184	28	129	1,231
Louisiana	19	30	165	263	13	78	903
Kansas	19	18	95	228	10	81	1,079
Oklahoma	71	63	304	683	43	264	3,578
Texas	214	160	869	1,960	141	706	8,697
Total	336	278	1,505	3,447	235	1,273	15,647

ARKANSAS

UNION COUNTY—O. W. Bates, El Dorado, Ark., L. H. Bates 1, 330 ft e 330 ft n swc sw sw 13-17-14.

Wilson & Chapman, El Dorado, Ark., Cora Epps 1, ne corner Lot 7 ne¼ 3-16-16.

CALIFORNIA

COYOTE HILLS—Standard Oil Co., Emery 46, 13-3-11.

FRESNO COUNTY—Rio Grande Oil Co., Edison 1, 35-13-16.

HUNTINGTON BEACH—W. H. Carlson, Carlson-Ford 1, 11-6-11.

LONG BEACH—Young Pet. Corp., Hilton 1-A, 29-4-12.

MT. POSO—General Pet. Corp., Heisen 53, 16-27-28. Signal O&G Co., Signal-Glide 22-B, 27-27-28.

PLAYA DEL REY—The Ohio Oil Co., Brown 1, 21-2-15; Dickinson 2, 21-2-15.

ROUND MOUNTAIN—Shell Oil Co., Jewett 11, 29-28-29.

SEAL BEACH—Continental Oil Co., Bixby 33, 3-5-12.

SUNSET—Wellington Oil Co., Ltd., Wellington-Maricopa 3, 8-11-23. Doyle Pet. Corp., Son-Crail 8, 8-11-23.

LOUISIANA

ACADIA PARISH—Chas. P. Siess, Tr., Lake Charles, Lyons 1, 4-10s-1e, 1125 ft n and 225 ft e of sw c of Sec.

ASCENSION PARISH — Gulf, Houston, United Lds. Co., 18, 15-10s-4e, 3200 ft e and 810 ft n of sw c of Sec.

BOSSIER PARISH — Goodman, et al, Shreveport, Robertson 1, 25-23n-12w, 270 ft w and 330 ft s of ne c sw sw.

CALCASIEU PARISH—Gulf, Houston, Star-Vincent 50, 34-10s-12w, 30 ft n and 30 ft w of se cor of Lot 50, subdi of sw¼. Texas-Gulf Sulphur Co., Vinton, Industrial Lbr. Co. 3, 30-9s-12w, 730 ft e and 380 ft s of nw c of ne; Lutcher-Moore 15, 19-9s-12w, 340 ft e and 240 ft s of nw c se. Vacuum Oil Co., Houston, Freiberg and Wolf 5, 9-10s-9w, 50 ft s and 540 ft w of ne c ne sw.

CAMERON PARISH—Yount-Lee Oil Co., Beaumont, School Section 10, 16-12s-10w, 2330 ft e and 1650 ft n of sw c of Sec.

DE SOTO PARISH—Arkansas Fuel Oil Co., Shreveport, Mrs. C. B. Scott 1, 32-14n-13w, 330 ft n and 330 ft w of c of Sec. R. O. Roy, Shreveport, E. P. Lee 1, 33-14n-13w, 660 ft n and 660 ft e of sw c of Sec; R. A. Nelson 1, 36-15n-13w, 660 ft s and 660 ft e of nw c of Sec.

OUACHITA PARISH—Louisiana G&F Co., Shreveport, Breard 2, 45-18n-4e, s 8° 56 ft w 981 ft and s 81° 0 ft e 489 ft from nw c of Sec. United Carbon Co., Monroe, Spades 5, 34-19n-4e, 842 ft w and 1758 ft s of ne c of Sec.

SABINE PARISH—J. R. Crawford, Shreveport, Meshell 1, 32-8n-12w, 408 ft s and 200 ft e of nw c se sw. Jean Longaria, et al, Shreveport, Geo Belton 1, 31-9n-13w, 330 ft s and 330 ft e of c of ne.

ST. MARTIN PARISH—Rycade Oil Corp, Houston, Atchafalaya Fee 6, 13-9s-8e, 3092 ft n and 3985 ft w of se cor of Sec.

TERREBONNE PARISH—The Texas Co., Shreveport, State-Caillou Island 4, 19-23s-20e, 2050 ft s and 500 ft w of ne c of Sec; State-Lake Barre 5, 30-21s-20e, 1200 ft s and 150 ft e of nw c of Sec.; State-Lake Barre 6, 30-21s-20e, 1650 ft s and 300 ft e of nw c of Sec.

KANSAS

BUTLER COUNTY — National Ref. Co., Snirley 1, c nw sw, 25-23-6e. Empire O&R Co., Koogler 97, nw c se, 20-26-5e. Alladin Pet. Co., Basinger 2, sw nw se 24-27-3e.

COFFEY COUNTY—Ritchey et al, Assemacher 1, c se, 36-22-13e. Ritchey & Moore, Tebbins 2, ne nw nw, 18-23-15e.

COWLEY COUNTY—Blankenship Pet. Co., Sloan 2, sw nw nw, 28-30-3e. Crow et al, Stafford 1, csl n½ n½ ne, 17-32-5e.

ELK COUNTY—Flemming et al, Morgan 1, se c, 8-29-9e.

GREENWOOD COUNTY—Derby Pet. Co. et al, Sheets 1, sw ne ne 23-22-11e. Faulkner et al, Schwintz 1, nw sw sw, 30-24-13e; Simmons and Rhodes, Luthi 5, ne se sw, 29-22-13e.

LYON COUNTY—Sheedy et al, Hughes 6, sw c ne, 19-21-10e.

McPHERSON COUNTY—Shell, Johnson 1, se nw se, 36-19-2w; The Texas Co., Munn 2, c ne 12-20-2w; Shell, Koehn 3, nw ne ne 16-21-3w.

RICE COUNTY—Independent O & G Co et al, Tomlinson 1, ne sw nw, 32-18-8w.

SEDGWICK COUNTY—Shell, Southwestern 1, (owdd) sw se sw, 2-27-1w; G. L. Ramsey, Mason 3, (owdd) sw ne ne, 15-26-2e.

SUMNER COUNTY—Lario Oil Co., et al, Wenrich 12, sw ne nw, 23-32-2e.

OKLAHOMA

CARTER COUNTY—Magnolia, Spigner 1, sw ne nw 24-1s-3w; Spigner 1, nw se nw 24-1s-3w. Ven Mex Oil Co., Keener 1, nw sw se 29-1s-3w. Magnolia, Cox 1, se c nw, 21-2s-2w. Kanoco Oil Co., Coffey 1, ne c se nw, 25-4s-3w.

CREEK COUNTY—Foster Pet. Co., West 1, ne sw sw, 25-19-8e. Sample and Mann, Tucker 1, nw c sw 17-19-9e. Pure, Brightman 1, ne nw ne 30-19-10e. Emerson et al, Brown 2, cnl nw ne, 20-17-10e. Riverland Oil Co., et al, Swoveland 1a, c ne 33-17-12e. Shaffer O&R et al, Lewis 3, ne sw sw 10-15-8e, (owdd). Sheridan Oil Co., Reading 1a, nw ne se 25-15-11e. C. G. Tibbens Oil Co., Coneisenney 8, sw c se ne sw, 30-15-9e, (owdd). W. A. Jenkins et al, Kimble 1, ne c sw, 23-14-10e.

LINCOLN COUNTY—Thos. B. Slick Oil Co., 1, sw c, 9-14-4e. Prairie O& G Co., and Tom Slick Wolfe 1, nw c 16-14-4e. Magnolia, Wagner 2, se nw ne, 17-15-4e. Meyers 2, ne c 17-14-4e.

MARSHALL COUNTY — Bilbo Oil Trust Co., Taliaferro 9, sw c se ne se 14-5s-5e. Goddard Oil Co., Taliaferro 1, se sw ne, 14-5e-5e.

McINTOSH COUNTY—Midwestern O&G Co., Frazier 1, c se ne, 36-12-18e.

MURRAY COUNTY — Chieftain Royalty Co., Hendricks 1, sw se nw, 27-2n-2e.

MUSKOGEE COUNTY—Hale and Reynolds, Rose 1, (owdd) nw c ne nw nw, 16-15-18e. Bement Oil Co., Toney 1a, ne nw sw, 15-13-16e.

OKFUSKEE COUNTY — Champlin O&R Co., Washington 9, ne nw se, 15-11-11e. Suppes et al, Severs 2, sw c se, 35-11-9e. Kessler Pet. Co., Calloway 1a, se ne sw 3-11-12e.

OKLAHOMA COUNTY — Coline Oil Co., Clauer 6, se sw se, 25-11-3w. I. T. I. O. Co., et al, Sudik 3, nw ne sw 31-11-2w. Sinclair O&G Co., Vencl 7, sw ne se, 31-11-2w. Vencl 6, se nw se, 31-11-2w. Vencl 5, sw nw se, 31-11-2w. I. T. I. O. Co., Jones 11, sw se nw, 31-11-2w. Sudik 4, se ne sw, 31-11-2w; Sudik 5, sw ne sw, 31-11-2w. Sinclair O& G, School land 5, sw ne ne, 36-11-3w; School land 4, ne nw ne, 36-11-3w. Slick et al, Classen 1, nw se nw, 2-11-3w. I. T. I. O. Co. et al, Mitchell 1, se nw se, 14-11-3w. Pasadena Heights 2, ne sw se, 14-11-3w; Knox 3, sw ne se, 14-11-3w.

OKMULGEE COUNTY—J. F. Egan, Fox 1, nw c sw sw ne, 22-16-13e. Mechlin and Berlin, Colbert 9, sw c ne ne 14-14-14e. J. L. Selby Oil Co., Anderson 3, ne c nw, 35-14-14e. W. C. Newman, Replogle 1a, sw c se, 19-12-12e. Troutt Drilling Co., Doyle 10, csl nw nw, 28-13-14e.

OSAGE COUNTY—Winona Oil Co., cel w2 e2 ne, 20-29-9e. W. D. Gray et al, 6, sw c se, 34-24-8e. Marland, 75, se ne ne 26-24-11e. Peter Adamson, Jr., 2, se c nw se nw 5-21-9e. Clint Moore Estate et al, 3, ne nw ne 16-21-9e.

PAWNEE COUNTY—John Byrnes, Edmiston 4, nw c ne sw sw, 30-21-9e. Geraldine Oil Co., Edmiston 4, se c sw nw sw, 30-21-9e. C. C. Chamberland, Coats 3, cwl sw nw 26-20-9e. J. N. Vanhuss, Lashley 1, se nw sw, 27-20-9e.

PAYNE COUNTY — Cushing Gas & Ref. Co., McFeathers 1, nw c se se 31-19-4e (owdd).

PONTOTOC COUNTY—Delaney and King, Norris 1, se c nw, 12-4n-7e.

POTTAWATOMIE COUNTY—Strapp and King, Townlot 1, sw c nw, 8-9-5e.

SEMINOLE COUNTY — Sunray Oil Co., Mathis 1, se c ne, 12-5-7e. Blackwell O&G Co., Fleet 4, ne sw nw, 13-5-7e. Gypsy, Taylor 6, sw se sw, 19-9-6e. Gypsy Oil Co., Taylor 5, se c sw, 19-9-6e. Eason Oil Co., Anderson 1, ne nw ne 22-9-5e. Carter, Chowning 6, se sw sw 19-9-6e. Mid-Continent Pet. Corp., Smith 15, ne nw se, 5-7-7e. Smith 16, nw c se, 5-7-7e. Harjo 1, ne sw se 20-6-6e. Harris et al, Burgess 2, sw nw sw 21-6-6e.

STEPHENS COUNTY—Magnolia, Green 10, ne nw nw 13-1s-4w. Pace et al, Feather 1, se c nw, 23-2s-8w. Dumar Oil Co., Wilkerson 1, ne nw nw 15-2s-6w.

TEXAS

Operator, Lease or Owner, Acreage, Well, Survey, Distance to lease lines or well.

ARCHER COUNTY—Shell, Dallas, W. R. DuPriest, 60, 2, 2490, TE&L sur, 1045 ft from e and 150 ft from s line. J. H. Massie, Wichita Falls, J. T. Richardson, 80, 4, S. Anderson sur, 300 ft n of No. 3; 3, same sur, 475 ft sw of No. 2. Shappell Oil Co., Wichita Falls, R. O. Prideaux, 200, 17, J & J Hand sur, 300 ft w of No. 16. Bateman & Dingee et al, Vernon, W. P. Ferguson, 160, B1, S 1, S. P. Ry sur, 660 ft from n and w lines of nw¼ of se¼. Primrose Refg. Co., Wichita Falls, H. Buerger, 40, 1, S 121, Club Ranch sur, 150 ft from n and w lines. Geo. L. Pace, Wichita Falls, G. A. Lauster, 100, 1, B 2, BBB&C sur, 450 ft from n and 150 ft from e line. T. F. Hunter, Wichita Falls, A. M. Kunkel, 20, 3, G. W. Stell sur, 300 ft e of No. 1. Pandem Oil Corp., Wichita Falls, J. A. Young, 40, 10, 2426, TE&L sur, 300 ft w of No. 8. W. C. Young, Archer City, E. E. Threet, 20, 1, M. Pickens sur, 150 ft from n and w lines. Prairie O&G Co., Ranger, Clark, 9, No. 4 S. Anderson sur, 863 ft s of No. 8.

ANDERSON COUNTY—Humble, Houston, A. B. Mandelstam, 318, 5, N. K. Sessna sur, 500 ft from w and 150 ft from s line.

ANDREWS COUNTY—Deep Rock Oil Co., Fort Worth, B. L. King, 160, 1, S 22, B A46, School sur, 990 ft from n and w lines of nw¼.

AUSTIN COUNTY—Humble, Houston, O. Wilson, 4, Wm. Harvey sur, 2000 ft from nw and 150 ft from sw line. J. W. Wilson, 3, Wm. Harvey sur, 1550 ft from nw and 150 ft from ne line.

BROWN COUNTY—Gunn Prod. Co., Cross Plains, J. C. Dickens, 60, 1, N. B. Mitchell sur, 750 ft from w and 450 ft from s line. E. L. Smith Oil Co., Inc., Mexia, L. A. George, 100, 19, S 42, HT&B sur, 300 ft from e and 750 ft from s line. Phillips Pet. Corp., Bartlesville, Okla., Williams, C, 100, 1, No. 792, J. Beck sur, 541 ft from n and 448 ft from e line.

BEXAR COUNTY—I. L. Dingman, San Antonio, W. Kelso, 269, 2, F. Rodriguez sur, 1100

ft from n and 1500 ft from e line. Texas Pet. Co., San Antonio, H. C. Gayle, 140, 4, B 39, C. A. Yoakum sur, 700 ft s of No. 3. I. L. Dingman, San Antonio, R. J. Coffey, 420, 1, Rodriguez sur, 800 ft from sw and 195 ft from se line.

BAYLOR COUNTY — Perkins & Cullum, Wichita Falls, W. H. Portwood, 40, 1, 1575, TE&L sur, 150 ft from n and w lines of e½ of ne¼.

BASTROP COUNTY—Superior oil Co., Austin, J. M. Moore, 106, 1, G. T. Glasscock sur, 500 ft from n and w lines.

BEE COUNTY—Morgan Oil Corp., Houston, Ray, 938, 1, 3500 ft from nw and 2500 ft from ne line.

CAMP COUNTY—J. C. Rogers & Southern Petroleum Expl. Co., Abilene, L. Infelt, 430, 1, R. M. Montgomery sur.

CALLAHAN COUNTY—R. C. McCarter et al, Rising Star, R. P. Odom, 194, 1, No. 218, T. H. Brown sur, 200 ft from s and e lines. Humble, Cisco, I. N. Jackson, 320, G2, S 5, T&NO sur, 200 ft from s and e lines (correct lcn). Campbell, 320, 2, S 21, E. T. Ry sur, 150 ft from n and e lines of n½. Westheimer & Daube, Ardmore, Okla., L. N. Williams, 100, 2, S 60, Bayland Asy. sur, 1750 ft from n and 450 ft from e line. Star Drilling Co., Wichita Falls, E. L. Finley, 92, 1, S 75, Bayland Asy. sur, 150 ft from n and 575 ft from e line sw¼. B. A. Duffy, Abilene, J. W. Brown, 366, 1 S 250, A. Ewers sur, 1525 ft from n and 150 ft from e line sec. Moutray Oil Co., Abilene, P. G. Hatchett, 320, S 20, D&D Asy. sur, 300 ft e of No. 4.

CHAMBERS COUNTY—Sinclair, Houston, J. Wilburn, 62, 6, H. Griffith sur, 100 ft sw of No. 2. Sun Oil Co., Beaumont, Z. T. Wilburn, 20, 6, Wm. Hodge sur, 175 ft w of No. 4. J. Wilburn, 65, 5, Wm. Hodge sur, 100 ft w of No. 4; 6, same sur, 75 ft w of No. 3. Humphreys Corp., Houston, D. N. Scott, 50, 2, H. Griffith sur, 50 ft n of center of s line. Superior Oil Prod. Co., Houston, H. Jackson, 1, E. Barrows sur, 150 ft from s and 625 ft from w line. Mills Bennett Prod. Co., Houston, J. F. Wilburn, 10, 4, H. Griffith sur, 100 ft w of No. 3. R. E. Ferrell, Goose Creek, Wilburn 2, 1, H. Griffith sur, 25 ft from e and 50 ft from s line. F. L. Thompson, San Antonio, Wilburn, 10, 2, Griffith sur, 100 ft w of No. 1.

COLEMAN COUNTY—P. H. Davies Co., Coleman, Overall, 60, 1, S 71, B 29, GH&H sur, 330 ft from n and 1830 ft from e line sec. McCamey-Whitfield, Fort Worth, Sealy, 160, 1, S 59, GH&H sur, 300 ft from s and e lines of ne¼. Continental Oil Co., Wichita Falls, M. T. Overall, 98, 16, S 9, B 1, GH&H sur, 200 ft from n and e lines. Atlantic Oil Prod. Co., Dallas, M. T. Overall, B, 40, S 9, B 1, GH&H sur, 600 ft e of No. 1. Bill Hix, Dallas, H. Beck, 50, 2, S 99, H. Beck sur, 300 ft n of center of s line. Arcadia Refg. Co., Brownwood, E. Gray, 20, 1, S 170, M. Scott sur, 750 ft from s and w lines of se¼.

CULBERSON COUNTY—W. L. Kornrumpf, El Paso, W. D. Garren, 1, S 15, B 79, School sur, sw cor of sec.

CLAY COUNTY—Saxet Gas Co., Petrolia, Stine, J., 80, 3 J, B 4, PCSL sur, 120 ft from n and 150 ft from w line.

CARSON COUNTY — Cockrell-McIlroy Oil Co., Amarillo, Eller, 160, 1, S 200, B 3, I&GN sur, 330 ft from n and e lines of nw¼; Simms, 60, 1, S 11, B 7, I&GN sur, 330 ft from s and e lines of ne¼ or se¼.

CALDWELL COUNTY—Gulf, Houston, T. Briscoe, 100, 1, J. D. Rains sur, 2050 ft from w and 150 ft from s line.

CROCKETT COUNTY—Dolman & Moore, Fort Stockton, P. Perner, 640, 1, S 36, B 2, I&GN sur, 3135 ft from n and 1485 ft from e line sec. California Co., Midland, J. M. Shannon, 480, 2, S 42, B BB, E&LR sur, 258 ft from n and 2996 ft from e line.

DUVAL COUNTY — Humble, Houston, Kohler B, 44, No. 424, 495 ft from s and e lines. Southern Crude Oil Pur. Co., Fort Worth, J. Dunn, 1, No. 480, 4950 ft from e and 3466 ft from s line sec; J. Dunn, 1, J. Dunn sur, 4950 ft from e and 5280 ft from s line survey. Callahan, Howard & Smith, Laredo, J. M. Luby, 160, 1, Sec. 24, 3960 ft from n and w lines of sec.

EASTLAND COUNTY—Chestnut & Smith Corp., Breckenridge, C. C. Jones, 80, 1, S 62, B 4, H&TC sur, 2320 ft from e and 410 ft from s line ne¼. Lone Star Gas Co., Dallas, M. B. Lloyd, 366, 1, J. Rubarth sur, 1715 ft from w and 2299 ft from s line sur. Texas Pacific Coal & Oil Co., Thurber, Fee 5, C. L. Durocher sur, 2750 ft from s and 5600 ft from e line.

ECTOR COUNTY—Independent O. & G. Co., Fort Worth, J. Scharbauer, 80, 1, S 6, B 44, T&P sur, 330 ft from w and 280 ft from s line. Humble, Wichita Falls, A. Kloh, D, 640, 7, S 7, B 44, T&P sur, 330 ft from n and 440 ft from w line sec.

ERATH COUNTY — C. H. Goodwin et al, Stephenville, Canfield, 67, 1, W. A. Holland sur, 400 ft from e and 500 ft from s line.

FORT BEND COUNTY—Gulf, Houston, J. M. Moore, 22, Jas. Frazier sur, 5217 ft from n and 575 ft from w line.

GRAY COUNTY — Wilcox O. & G. Co., Tulsa, Combs, 160, 11, S 35, B 3, I&GN sur, 330 ft from s and w lines of sw¼. Magnolia, Dallas, S. Faulkner, 160, 6, S 29, B 2, H&GN sur, 330 ft from n and e lines of se¼. W. A. Scott, Amarillo, N. A. Cobb, 320, 1, S 184, B 3, I&GN sur, 400 ft from w and 330 ft from s line n½. Big Gray Oil Co., Pampa, J. M. Saunders, 80, 2, S 41, B 3, H&GN sur, 330 ft from s and e lines of w½ of sw¼. Gulf, Fort Worth, P. A. Worley, A, 160, 6, S 36, B 3, I&GN sur, 330 ft from n and 240 ft from e line sw¼. McMan O. & G. Co., Tulsa, Okla., J. H. Palmer, 100, 9, S 31, B B2, H&GN sur, 928 ft from e and 849 ft from s line; 8, 928 ft from e and 330 ft from s line.

GAINS COUNTY—Humble, Wichita Falls, C. B. Carswell, 480, 1, S 23, B A27, School sur, 660 ft from n and w lines of sec.

GUADALUPE COUNTY—F. L. Thomson, San Antonio, W. R. Posey, 52, 1, J. W. Robinson sur, 150 ft from n and w lines. Grayburg Oil Co., San Antonio, G. M. Wells, 2, J. La Baume sur, 2490 ft from n and 3730 ft from w line. Cranfill & Reynolds, Dallas, R. C. Appling 117, 2, Jas. Hodges sur, 50 ft from s and e lines. Simms Oil Co., Dallas, J. Manford, 88, 3, Jas. Hodges sur, 225 ft from e and 450 ft from n line. United North & South Dev. Co., San Antonio, P. Roamel, 34, 3, J. W. Robinson sur, 150 ft from s and e lines. Gulf Prod. Co., Houston, H. H. Tadlock, 99, 2, J. C. Darst sur, 450 ft from n and 150 ft from w line; J. C. Malaer, 72, 1, J. B. Alexander sur, 150 ft from n and w lines. Magnolia, Dallas, J. M. Richburg, 102, 2, J. B. Alexander sur, 300 ft ne of No. 1. Humble, Houston, J. E. Tadlock, 50, 2, J. C. Darst sur, 150 ft from n and 172 ft from w line; Y. Wilson, 10, 4, J. C. Darst sur, 150 ft from s and 172 ft from e line.

HILL COUNTY—Pure Oil Co., Fort Worth, J. A. Sesulka, 108, 1, Tyler C. S. L. sur, 200 ft from s and e lines.

HUTCHINSON COUNTY—Midwest Explo. Co., Amarillo, Ware, B, 160, 1, S 124, B 4, I&GN sur, 330 ft from n and 990 ft from w line nw ¼; Pitcher, A, 160, 1, S 19, B M21, TC Ry. sur, 330 ft from s and w lines of se¼.

HENDERSON COUNTY—Shell, Houston, S. T. Stephens, 117, 1, I. D. Owen sur, 750 ft from n and w lines.

JACK COUNTY—Robt. Watchorn, Oklahoma City, S. E. Maxey, 120, 4, C. Robbins sur, 870 ft from w and 150 ft from s line; 5, 570 ft from w and 150 ft from s line; 6, 300 ft n of No. 5. Panhandle Refg. Co., Wichita Falls, Daniels, 150, 5, I. Hughson sur, 550 ft from e and 510 ft from s line. Waggoner & Gose, Wichita Falls, J. W. Maxey, 20, 1, J. W. Maxey sur, 150 ft from n and e lines.

KARNES COUNTY—W. E. Hewit Co., Beeville, H. W. Motulla, 125, 1, V. Blanco sur, 900 ft from n and 500 ft from e line.

KINNEY COUNTY—Magnolia, Dallas, C. B. Wardlaw, 1, Valdez sur, 2640 ft from n and w lines.

LIBERTY COUNTY — Jno. A. Deering, Houston, J. W. Wilhite, 5, 1, S 125, H&TC sur, 150 ft from n and w lines of se¼. Gulf, Houston, W. H. P. McFadden, A, 947, 1, Jas. McFadden sur, 130 ft from s and 6994 ft from e line.

LIVE OAK COUNTY — Houston Oil Co., Houston, R. Boothe, 1, (corrected location), M. B. Kivlin sur, 3000 ft from nw and 400 ft from sw line.

MONTAGUE COUNTY—Bridwell Oil Co., Wichita Falls, E. E. Edmondson, 49, 11, T. R. Edmondson sur, 60 ft s of No. 8. Texas Chief O. & G. Cos., Wichita Falls, M. L. Mitchell, 111, 1, E. A. Walker sur, 150 ft from w and 1033 ft from s line. J. L. King, Nocona, S. F. Loy, 25, 1, Wm. Donoho sur, 150 ft from n and e lines. O. V. Beck, Nocona, C. H. Howard, 40, 1, F. Robertson sur, 150 ft from n and w lines.

MEDINA COUNTY—Burgin, Jones & Wilson, Yancey, H. B. Hardt, 100, 1, No. 539, 303 ft from w and 165 ft from s line.

McLENNAN COUNTY—Phillips & Oliver, Waco, G. McNamara, 1500, 1, No. 6, Blk. 1, 2300 ft from s and 900 ft from e line.

NAVARRO COUNTY—G. C. Kent, Corsicana, C. W. Lockhart, 101, 11, R. C. S. L. sur, 150 ft from s and w lines. Wm. Clarkson, Jr., Houston, Bradley, 200, 27, R. C. S. L. sur, 488 ft from n and 465 ft from w line.

NUECES COUNTY—Agua Dulce O. & G. Co. and South Texas Prod. Co., Agua Dulce, J. A. Dauderman, 160, 1, S 32, Benton sur, 450 ft from n and e lines of Blk. 13.

PECOS COUNTY—Shell, Dallas, Smith, D, 320, 6, S 24, B 194, GC&SF sur, 330 ft from n and 2398 ft from w line; 7, 330 ft from n and 1688 ft from e line. W. T. Walsh et al, Fort Stockton, Henderson, 640, 1, S 16, B 136, T&St.L. sur, 1650 ft from e and 2310 ft from s line sec. Dixie Oil Co., Inc., McCamey, F. E. Toborg, 3, S 539, A&B sur, 150 ft from w and 750 ft from s line. Buell & Hagan and Independent O. & G. Co., Midland, Pecos Valley Co. 80, 1, S 21, B 10, H&GN sur, 160 ft from n and e lines of s½ se¼. Southern Crude Oil Pur. Co., Fort Worth, J. H. Tippett, 75, 4, S 61, B 194, GC&SF sur, 229 ft from n and 1032 ft from e line.

REFUGIO COUNTY — Houston Oil Co., Houston, F. W. Heard, A1, Refugio sur, 150 ft from s and e lines. Laredo Gas & Pet. Co., San Antonio, G. Strauch, 13, 2, B 5, Refugio sur, 650 ft from w and 150 ft from s line. Morgan Oil Corp., Houston, Hornsburg, 2½, 1, Refugio sur, 150 ft from n and e lines of Blk. 32.

REAGAN COUNTY — Hagan & Emch and Amerada Pet. Corp., San Angelo, Sawyer, 80, 1, S 125, B 1, T&P sur, 330 ft from s and 990 ft from e line sec.

SHACKLEFORD COUNTY — Dr. Victor Zeigler, Stamford, Dawson, 1, S 193, E. T. RY. sur, 1960 ft from n and 660 ft from e line sec; 2, 660 ft from n and e lines of sec. Phillips Pet. Corp., Bartlesville, Okla., Parrish, 161, 11, S 47, Blind Asy. sur, 514 ft from n and 150 ft from e line se¼. Loggie & Arendt Oil Co., Albany, J. Blach, 320, 10, 389, TE&L sur, 2000 ft from nw and 1500 ft from sw line sec. St. Mary's Oil & Gas Co., Moran, J. O. Gordon, 62, 5, S 5, L.A.L. sur, 450 ft from w and 150 ft from s line. Tom James, Albany, W. J. Dodson, 80, 1, S 1, Blind Asy. sur, 610 ft from n and 150 ft from e line se¼. Lillian D. Hill, Mineral Wells. B. S. Walker, 80, 2, S 138, TE&L sur, 150 ft s of No. 1.

STEPHENS COUNTY — W. P. Collins, Breckenridge, W. W. Cunningham, 70, 1, 1210, TE&L sur, 300 ft from w and 206 ft from s line. Phillips Pet. Corp., Bartlesville, Okla., I. Sikes, 85, 2, S 13, B 6, T&P sur, sw corner. Texas Consolidated Oil Co., Breckenridge, O. S. Martin, 320, 1, 1304, TE&L sur, 330 ft from n and w lines. Chestnut & Smith Corp., Breckenridge, J. E. Chesley, 320, 1, S 52, B 7, T&P sur, 350 ft from w and 330 ft from s line sec.

THROCKMORTON COUNTY—H. A. Martin, Wichita Falls, W. H. Crowsen, 140, 1, 2238, TE&L sur, 450 ft from n and e lines. Nate Rosenbaum et al, Breckenridge, H. C. Welch, 40, 4, 907, TE&L sur, 450 ft from n and e lines. O. C. Proffit, Breckenridge, Reynolds, 40, 1, A. Tartan sur, 1700 ft from e and 700 ft from n line. Wilson & Swain, Woodson, J. T. Odell, 40, 13, 696, TE&L sur, 1350 ft from e and 150 ft from s line. Barrett & Jones, Mineral Wells, J. C. Timms, 260, 1, 688, TE&L sur. C & B Oil Co., Breckenridge, J. E. Hughes, A, 40, 12, 902, TE&L sur, 450 ft from s and w lines of se¼; J. E. Hughes, B, 40, 8, 902, TE&L sur, 450 ft from n and e lines of se¼; A. A. Horton, 40, 1, 905, TE&L sur, 150 ft from s and e lines. J. A. Burman et al, Cisco, H. L. Morrison, 40, 1, 997, TE&L sur, 200 ft from e and 150 ft from s line ne¼. Continental Oil Co., Wichita Falls, S. J. Walker, 80, 13, 907, TE&L sur, 150 ft from e and 455 ft from s line; 14, 150 ft from s and e lines. Webb & Gaskill, Breckenridge, J. L. Tuggle, 200, 2, 910, Premium sur, 750 ft from n and 1000 ft from e line. Decatur Oil Co. et al, Wichita Falls, J. T. Odell, B, 40, 1, 696, TE&L sur, 150 ft from n and w lines; 2, 300 ft s of No. 1; 3, 322 ft s of No. 2; 4, 322 ft s of No. 3; 5, 322 ft s of No. 4; J. T. Odell, A, 40, 1, 696, TE&L sur, 150 ft from s and w lines; 2, 300 ft e of

Steel Derricks

THE KM CO Derrick stands as nearly like it were formed from a solid piece of steel as special structural methods can make it. Milled ends on each leg gives it full bearing on the leg below. Gusset plates at all leg splices are of one-piece special quality flanging steel and inner splice angles are milled to fit the fillet of the derrick leg — insuring close-fitting, rigid construction. One size bolt for all connections. Legs are uniform and interchangeable, providing speedy and economical erection. A. P. I. Specifications are the basis of all design.

Coming to the oil world as a new offering from KM CO, this superior derrick is quickly being given a place among the many popular products designed and advanced by the men of KM CO during the past twenty-five years.

PRODUCTS

Steel Derricks, Rig Irons, Bull Wheels, Calf Wheels, Band Wheels, Crown Blocks, Tug Wheels, Sand Reels, Steel Tankage, Floating Roofs, Tank Fittings, Refinery Equipment, Steel Plate Construction.

THE KIRK-MORROW IRON WORKS COMPANY

IOLA, KANSAS

Sales Offices: Hunt Bldg., Tulsa, Okla.; Magnolia Bldg., Dallas, Texas; Central Bldg., Wichita, Kans.

30 CHURCH ST., NEW YORK, N. Y.

No. 1; 3, 150 ft from s and e lines; 4, 150 ft from n and w lines; 5, 322 ft n and No. 6; 6, 300 ft n of No. 1; 7, 322 ft n of No. 5; 8, 300 ft s of No. 4; 9, 150 ft from n and e lines; 10, 316 ft w of No. 9; 11, 300 ft s of No. 9. Burton & Herman, Woodson, White, 40, 1, 955, TE&L sur, 150 ft from s and e lines. Geo. Mollenkopf, Woodson, J. E. Hughes, 40, 2, 902 TE&L sur, 2310 ft from e and 1710 ft from n line sec; D. A. Worley, 40, 7, 688, TE&L sur, 450 ft from e and 150 ft from s line. Owen-Sloan Oil Co., Fort Worth, J. T. Odell, 40, 3, 695, TE&L sur, 150 ft from n and e lines; 2, 316 ft s of No. 3; 1, 150 ft from s and e lines. L. I. Lyon, Wichita Falls, L. A. Spain, 40, 1, 940, TE&L sur, 150 from s and e lines. Moutray Oil Co., Abilene, R. H. Brown, 235, 1, 919, TE&L sur, 1450 ft from n and w lines of sec. Young Bros. & Alexander, Inc., Fort Worth, H. C. Welch, 30, 907, TE&L sur, 300 ft w of No. 3.

TOM GREEN COUNTY—Cosden Oil Co., Fort Worth, J. W. Johnson, 528, 1, J. S. Grant sur, 1050 ft from e and 150 ft from s line.

TERRY COUNTY — Penn Oil Co., Dallas, P. Carlisle, 640, 1, S 58, B E, EL&R sur, 990 ft from s and e lines of sec.

UPTON COUNTY — O. F. Miller et al, Odessa, C. Bell, 160, 1, S 98, B Y, 300 ft from n and w lines of nw¼.

UVALDE COUNTY — Phantom Oil Co., Tulsa, M. D. Cloudt, 661, 1, S 6, GC&SF sur, 450 ft from w and 988 ft from s line.

VAN ZANDT COUNTY—Pandem Oil Corp., Wichita Falls, I. L. Brin, 714, R. Sunigas sur, 660 ft from n and 330 ft from w line. W. A. Southworth, Dallas, G. J. Luther, 3, Jno. Goodman sur, se corner. W. T. Daniel, Dallas, F. Cumbie, 82, 1, Jno. Wright sur, 150 ft from n and w lines. Hartt Pet. Co., Dallas, M. L. Cox, 300, 1, C. I. Nugent sur, 650 ft from se and 310 ft from sw line.

WICHITA COUNTY—Hunter & Venmex Oil Co., Wichita Falls, J. & J. Waggoner, H, 1, H. George sur, 150 ft from w and 350 ft from s line Blk. 6. Continental Oil Co. and Hammond, Wichita Falls, T. J. Waggoner, A, 40, 2, B 7, H. George sur, 150 ft from n and e lines. A. T. Russell, Wichita Falls, Boyse, 40, 2, S 12, B W2, AB&M sur, 450 ft from n and 900 ft from e line. United Prod. Co., Wichita Falls, W. L. Hodges, 40, 13A, H&TB sur, 50 ft n of No. 6. Atlas Prod. Co., Burkburnett, Roller, 83, 14, C. T. Ry. sur, 130 ft se of No. 2. Magnolia, Dallas, D. E. Holcomb, 80, 25, H&TB sur, 50 ft s of No. 4. The Bonner Co., Wichita Falls, Cole, B, 100, 9, J. McCool sur, 300 ft e of No. 8. M. Staniforth, Wichita Falls, R. L. Crudup, 60, 3, B 10, DCSL sur, 300 ft n of No. 2. King Royalty Co., Wichita Falls, J. D. Mitchie, 28, 5, J. T. Lewis sur, 300 ft e of No. 2. Magnolia, Dallas, B. Ramming, 143, 9, T. T. Ry. sur, 500 ft n of No. 5.

WILLIAMSON COUNTY—J. W. Sconyers, Taylor, J. K. Lawrence, 15, 1, H. Owen sur, 150 ft from s and w lines. Hunt & McKamey, Georgetown, Bailey, 120, 2, W. Stubblefield sur, east central part of lease. M. M. Rowan, Fort Worth, A. Jackson, 40, 1, H. Owen sur, 150 ft from n and w lines. E. L. Chapman, Fort Worth, McConnell, 40, 1, S. Miller sur, 150 ft from w and 330 ft from s line; 2, 150 ft from n and w lines; L. W. Fuchs, 74, 1, S. Miller sur, 160 ft from n and 180 ft from w line; 2, 482 ft from w and 170 ft from s line; L. W. Fuchs, 10, 3, S. Miller sur, 314 ft e of No. 1; B. Lawrence, 45, 1, S. Miller sur, 150 ft from ne and 330 ft from se line. Simms Oil Co., Dallas, E. L. Lawrence, 170, 1, S. Miller sur, 150 ft from n and w lines. Arctic Oil Co., Taylor, W. L. Lawrence, 1, 1, H. Owen sur, 100 ft from s and w lines.

WALLER COUNTY—Humble, Houston, R. Hardy, B, 1, J. E. Groce sur, 298 ft from s and 920 ft from e line.

WHEELER COUNTY — H. R. Anderson, Shamrock, G. Reneau, 40, 1, S 98, B 23, H&GN sur, center of sw¼ of ne¼. Lone Star Gas Co., Dallas, W. B. Wofford, 80, 1, S 68, B 17, H&GN sur, 660 ft from s and e line of e½ of sw¼; J. M. Fuller, 80, 1, S 71, B 17, H&GN sur, 645 ft from e and 726 ft from s line w½ ne¼; L. C. Burnham, 40, 4, S 89, B 17, H&GN sur, 662 ft from n and w line sw¼ of se¼; A. S. Martin, 161, 2, S 52, B 17, H&GN sur, 1200 ft n of No. 1; C. L. Nickell, 80, 1, S 64, B 17, H&GN sur, 660 ft from s and w lines of n½ of nw¼. Fain-McGaha Oil Corp., Wichita Falls, I. Close, 9, S 80, B 23, H&GN sur, 660 ft from n and w lines of se¼.

WILBARGER COUNTY—E. J. Stump et al, Wichita Falls, Castlebury, 240, 1, S 67, B 14, H&TC sur, 1530 ft from e and 1050 ft from s line sec. Lesh & McCall, Nocona, C. Hall, 60, 1, S 105, B 14, H&TC sur, 200 ft from n and e lines.

YOUNG COUNTY—H. F. Rogers, Tulsa, M. M. Dilbeck, 160, 1, 330, TE&L sur, 150 ft from n and e lines. Chandler Drilling Co., Olney, Mullinax, 40, 1, 168, TE&L sur, se corner. Gordon & Morris, Breckenridge, H. M. Donnell, 40, 1, W. L. Donnell sur, 400 ft from n and w lines. Riner & Omohundro, Wichita Falls, E. C. Keith, 20, 1, 268, TE&L sur, 150 ft from s and e lines. R. P. Dorian, Wichita Falls, C. W. Johnson, 40, 5, B 12, E. W. Sargent sur, 750 ft from n and e lines. Nash & Windfohr, Graham, S. C. Jones, 122, 1, 60, TE&L sur, 942 ft from e and 1491 ft from n line sec. Riggs & Kleiner, Graham, S. Hardy, 60, 1, 251, TE&L sur, 637 ft from w and 450 ft from n line s½. E. R. Riggs, Graham, S. J. Allison, 89, 7, 150, TE&L sur, 450 ft from n and w lines of sec.

ZAVALA COUNTY—Everett Anglin, Crystal City, I. T. Pryor, 640, 1, A. Aguirre sur, center.

New Hearing Announced on Proposed Line to Yates Field

THE Interstate Commerce Commission has announced reopening for further consideration of the application of the Yates and West Texas Railway Company, for authority to construct a new line approximately 30 miles in length from Rankin and Upton Counties to Iraan and Crockett Counties, Texas, tapping the Yates oil field.

As proposed, the new line would connect with the Kansas City, Mexico and Orient Railroad of Texas, at Rankin, Texas, and find an outlet for its production to various sections of the country through the latter line and its connections. The applicant line presented its petition to the commission last year, shortly after the production of the Yates field pool had developed into great proportions, but objections were offered to the granting of the application by the Kansas City, Mexico and Orient Railroad on the grounds that no public necessity existed, or that if it did, it should be permitted to build the line, having pioneered that part of Texas and that if the line was built, it would devolve upon the Kansas City, Mexico and Orient Railroad of Texas to assume the burden of operation. In addition to the Yates field, the applicant contended that it would serve the livestock industry in the section to be traversed, from which it expected to secure a substantial and profitable tonnage, estimating that 530 carloads would be shipped out the first year, in addition to the inbound shipment of feed and supplies.

One of the largest ranch owners in the Southwest was present and testified at the hearing as to the value of the proposed line to the livestock industry in that section, stating that it would result in saving of time and costs in transportation and reduce the number of losses by death which now result from driving stock over long, circuitous and otherwise unfavorable roads and would greatly encourage an increase in livestock raising in that section.

During the early part of January, 1930, the commission rendered its findings in this case and denied that public necessity or convenience required the construction of the proposed line. The principal city to be served is Iraan, which has now grown from a handful of people to a thriving community of better than 4000 people, whose need for transportation service is now much greater than when the application was first presented. Likewise, the needs elsewhere must have grown along with the natural development and it would appear to one having some knowledge of this section that further consideration by the commission is more than likely to result in granting of the necessary authority for the construction.

It is also understood that the Kansas City, Mexico and Orient Railroad has requested the commission to further consider the application, which may indicate that the objections of that line have been removed. Whatever the further action of the commission may be, it is well recognized that the development of the particular section will be handicapped in many ways until rail transportation service is established. No date has been announced for the new hearing, but doubtless the commission will take prompt and early action, such as may be appropriate to the exigencies of the situation.

Tulsa Exposition Space Being Reserved

Tulsa.—More than 400 indoor booths and 100,000 square feet of outside space was announced open to exhibitors at the International Petroleum Exposition and Congress this week by William B. Way, general manager. The exposition is to be held October 4-11.

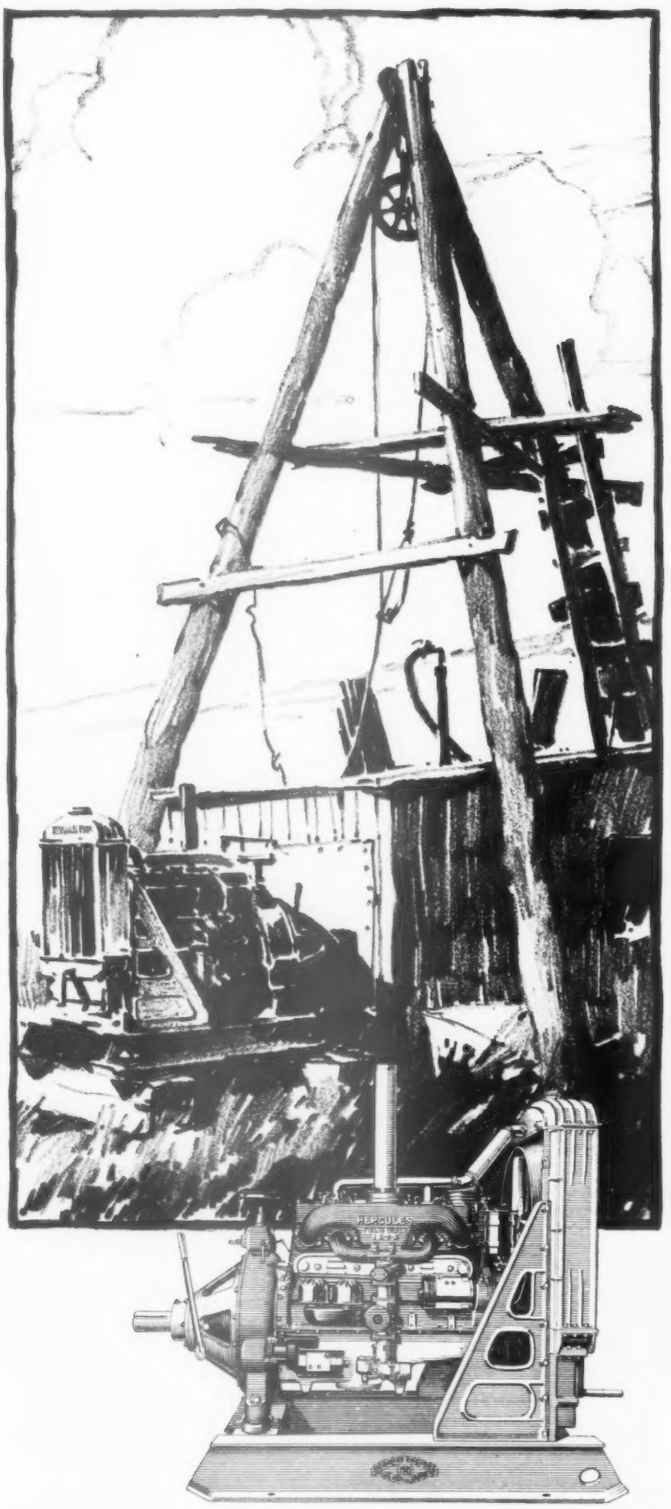
Of special interest to a branch of the petroleum industry which has not hitherto occupied a prominent place at the oil show is the new Marketer and Refiners building which has added 14,500 square feet of indoor space to the plant.

Exhibits in this new structure will cover only such displays as are of interest to the various departments of refining and marketing, including transportation, storage and measurement of products.

The annual meeting of the American Society of Mechanical Engineers, Petroleum Division, will be held during the exposition. The automatic pump station unit shown last year has been greatly improved according to W. G. Heltzel, chairman of the petroleum division executive committee. As an added feature of this exhibit arrangements are being made to control the pump station by human voice impulses.

From the foreign exhibitors the applications for space have started coming in, the first being Alfred Wirth & Company, Erkelenz, Germany. Mr. Wirth attended the 1929 exposition.

Hercules Power Means Low-Cost Core Drilling—



IN drilling for geological data on its leases near Lyons, Kansas, the Continental Oil Company uses a Hercules Engine to power its C. N. core drill. Running two twelve-hour towers daily—drilling core holes from 1000 to 1500 feet deep—they have found their Hercules-Powered equipment both reliable and economical.

Hercules Engines and Power Units are built in types and sizes suited to all oil-field applications. Sturdy, compact, and rugged in construction—always dependable—they are equal to the most exacting heavy-duty jobs.

HERCULES MOTORS CORPORATION
Canton, Ohio, U. S. A.

WEST COAST BRANCH: LOS ANGELES, CAL.
MID-CONTINENT BRANCH: TULSA, OKLA.

Hercules Power Units and Parts are also carried in stock by the Norvell-Wilder Supply Company of Houston, Texas; Beaumont, Texas; Fort Worth, Texas and Shreveport, Louisiana and by Bovaird & Company of Bradford, Pennsylvania.

HERCULES ENGINES

WILDCATS FROM ALL SECTIONS

WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
PECOS COUNTY—		
Atlantic Oil Prod. Co., Shearer 1	60	1488
Dixie Oil Co., McKenzie 1	*	2680
Southern Crude Oil Pur. Co., McKenzie 1	¶1½	2312
Stine & Griffith, McKenzie-Michael 1	*	3000
World Oil Co., University 1-C	*	2199

ANDREWS COUNTY—Deep Rock Oil Co. et al's A. R. King 1, dr 1740 ft; B. L. King 1, dr 1140 ft; W. J. Mathis 1, dr 1100 ft. Fuhrman Pet. Corp.'s W. T. Ford 1, ur 850 ft. Humble & Penn Oil Co.'s M. H. Wilson 1, rig.

BORDEN COUNTY—Phillips Pet. Co. & C. B. Shaffer's Good 1, top salt 1400 ft, dr 1665 ft.

BREWSTER COUNTY—E. L. Chapman et al's Skinner 2, elev 4240 ft, sd hfw 1250 ft. Trans-Pecos O&G Co.'s Jones 1, elev 3073 ft, sd 2095 ft.

COKE COUNTY—Arkansas Fuel Oil Co. & Dixie Oil Co.'s Stepp 1, sp. Gates & Fitzhugh's Mims 1, machine.

CONCHO COUNTY—Jas. Duffy & Watchorn O&G Co.'s Noyes 1, elev 1965 ft, sp.

CRANE COUNTY—Cranfill Bros. Oil Co.'s Tubb 1, rig.

CROCKETT COUNTY — California Co.'s Shannon 2, elev 2667 ft, dr 610 ft. W. E. Goldman & E. H. Moore's P. Perner 1, dk. Magnolia's Hoover 1, elev 2412 ft, top salt 660 ft, top lime 1890 ft, dr 2305 ft. Trans-Pecos Oil Co.'s Shannon 2, rig.

CULBERSON COUNTY — Grisham-Hunter Corp.'s W. D. Garren 1, dr 315 ft; Seay 3, elev 3634 ft, top salt 2730 ft, top Delaware 2934 ft, dr 3435 ft. Hickey et al's Finley 1, dr 2880 ft. W. L. Kornrumpf et al's Garren 1, sp and sd.

ECTOR COUNTY — Amerada & Skelly's University 1-B, lcn. Cosden Oil Co.'s Kloh 1, top salt 1275 ft, dr 2650 ft; Kloh 2, lcn; University 2-A, top salt 1045 ft, dr 1650 ft; University 2-B, junked 830 ft, skid rig 22 ft. C. P. Davis et al's Hendrick 1, sd 1120 ft. Gibson & Johnson's Scharbauer 1, elev 2986 ft, top salt 1220 ft, dr 1375 ft. Gulf Prod. Co.'s Kloh 1-G, dr 1250 ft; University 1, elev 2899 ft, top salt 925 ft, dr 3295 ft; University 2, rig; University 1-A, elev 2884 ft, top salt 1175 ft, dr 3310 ft; University 2-A, rig. Humble-Penn-Atlantic's Kloh 2-D, elev 2921 ft, top salt 1050 ft, flowing oil by heads and dr 3614-63 ft; Kloh 3-D, elev 2916 ft, top salt 1055 ft, cemt cas 3324 ft; Kloh 4-D, elev 2905 ft, top salt 1060 ft, dr 2910 ft; Kloh 5-D, top salt 1060 ft, dr 1550 ft; Kloh 6-D, top salt 1075 ft, dr 2325 ft; Kloh 7-D, dr 1340 ft; Kloh 8-D, rig; R. L. York 2, elev 2902 ft, top salt 1115 ft, top lime 3130 ft, flowing 190 bbls oil and dr 3614-90 ft; York 3, elev 2898 ft, top salt 1190 ft, dr 3580 ft; York 4, elev 2903 ft, top salt 1175 ft, dr 2050 ft; York 5, elev 2892 ft, top salt 1105 ft, dr 2780 ft; York 6, elev 2889 ft, top salt 1155 ft, dr 2990 ft; York 7, rig. Independent O&G Co. and Tidal Oil Co.'s Eidson 1, dr 800 ft. Landreth Prod. Corp.'s University 2-S, elev 2897 ft, top salt 1210 ft, cemt cas 3360 ft. Penn Oil Co. & Devonian Oil Co.'s Goodman 1, lcn. Shell Pet. Corp.'s E. J. Jones 1, top salt 1070 ft, dr 2510 ft. Simms Oil Co. & Phillips Pet. Co.'s University 1, top salt 1070 ft, dr 2250 ft; University 2, lcn. Skelly & Amerada's University 1-A, top salt 1060 ft, dr 2100 ft; University 2, dr 330 ft. Texas Co. & Cosden Oil Co.'s W. E. Connell 7, rig. TP Coal & Oil Co.'s McKenzie 1, dr 450 ft. H. F. Wurtz et al's E. A. Ibbetson 1, sp and sd.

EDWARDS COUNTY — Phillips Pet. Co.'s Holman 2, sp.

FISHER COUNTY—Cranfill-Reynolds Co.'s Johnson 1, elev 1843 ft, dr 2290 ft; Willingham 2, dr. 300 ft.

GAINES COUNTY—Humble O&R Co.'s C. B. Carswell 1, rig.

GLASSCOCK COUNTY—California Co.'s J. W. Baker 1, elev 2634 ft, dr 1900 ft; Jones 1, rig. Continental Oil Co.'s Miller 1, sd for rotary 1500 ft. FHE Oil Co.'s Cox 1, coring 2200 ft. Ed. Timberlake et al's Meek 1, elev 2792 ft, dr 2205 ft. World Oil Co.'s McDowell 3-C, rig.

ABBREVIATIONS

NOTE—The following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million feet or gas; abn—abandoned; bbls—barrels; b.s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in.—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

TOM GREEN COUNTY—Cosden Oil Co.'s Anson 1, rig. Phillips Pet. Co. & Sun Oil Co.'s B. F. Jennings-Gulden 1, co 390 ft. D. W. Wiley et al's Ed. Mayer 1, ur 620 ft.

HOWARD COUNTY—Meriwether Oil Co.'s Smith 1, elev 2590 ft, sd 2325 ft.

HUDSPETH COUNTY — California Co.'s University 1, elev 5109 ft, show gas 4021-24 ft, dr hard grey lime 4110 ft.

IRION COUNTY—Brown & Fox's Tankersley 2, dr 1390 ft. Cromwell et al's Nutt 2, dr 1010 ft. Kingwood Oil Co.'s Sugg 1, elev 2334 ft, sd after 4 shots, td 7818 ft. Straughn & Texannati Oil Co.'s Nutt 1, sp and sd. P. H. Williams et al's Ashe 1, elev 2726 ft, top lime 1712 ft, splicing line 8100 ft.

JONES COUNTY — Adkinson & Sandefer's Byron 1, co 2550 ft. Mid-Tex O&G Co.'s King 1, run cas to test 850 ft. oil in hole at 1980-81 ft. Phillips Pet. Co.'s Coates 1, dr 2310 ft.

LOVING COUNTY—California Co.'s Allen 1, dr 1390 ft; Reagan-McElvain 1, dr 650 ft. Hadlock et al's Russell 2-A, rig. L. E. Lockhart et al's Wheat-Ramsey 1, dr 510 ft. Lockhart & Co.'s Bowen-Wells 3, elev 2719 ft, top salt 763 ft, dr 1760 ft; Hubbard 5, elev 2695 ft, dr 2810 ft; Lepp 2, sp and sd; Wheat 1-H, sd hfw 5078 ft.

MENARD COUNTY—Cromwell & Jas. Duffy's Winslow 2, elev 2143 ft, dr 2540 ft. L. G. Priest et al's J. P. Sorrells 1, set cas 1585 ft.

MIDLAND COUNTY—Pure Oil Co.'s J. E. Hutt 1, dr 580 ft.

MITCHELL COUNTY—Gibson & Johnson's Scott 3, elev 2091 ft, top salt 739 ft, sd 1350 ft. Teas & Wheeler's Radford 1, elev 2223 ft, dr 4930 ft.

PECOS COUNTY—Angelo Petroleum, Inc.'s McKenzie 1, elev 2890 ft, top salt 908 ft, dr hfw 1985 ft. M. H. Black & Dittman's Pecos Valley 2, machine. California Co.'s Jasper 1, machine. E. L. Chapman et al's Streety 1, elev 2653 ft, dr 1945 ft. Continental Oil Co.'s Bennett-Robinson 1, sp. Cromwell-Tanner & Ellis' University 1, dr 420 ft. Crosby Prod. & Roy. Co.'s Cordova 1, elev 2320 ft, top salt 725 ft, dr hfw 1910 ft. Fisher & Lowrie's Webb 1, lcn. Galt-Brown Co.'s Thompson 1, elev 2325 ft, top salt 730 ft, fsh 815 ft. Hayes et al's Lea 1, lcn. Hussman Oil Co.'s Estes 1, sd in sulphur water 1661-75 ft. Independent O&G Co. & Buell-Hagan's Jasper 1, sp. C. S. Messinger et al's Byrne 1, dr 210 ft. J. R. Miller et al's Bennett 1, sp and sd. R. E. Moore et al's Arnold 1, dr hfw 1915 ft. Perren et al's Eaton 1, sp and sd. Phillips Pet. Co.'s Shearer 1, sd. R. W. Porpus et al's State 1, lcn. Rector Oil Co.'s Young 1, elev 2380 ft, top salt 635 ft, sd 665 ft. Sides & Cloyd's Blackstone-Slaughter 1, sd 802 ft. Southern Crude Oil Pur. Co.'s Eaton 1, dr 810 ft. The Texas Co.'s T. H. Wright 1, dr 765 ft. Trees Oil Co.'s Trees 3, elev 2518 ft, dr 1925 ft. Transcontinental Oil Co.'s University 1, elev 2552 ft, top lime 1035 ft, bad hole 4910 ft; White-Baker 2, elev 2695 ft, top salt 875 ft, sd hfw 1725 ft. W. F. Walsh et al's Scharbauer 1, dr 210 ft. Walsh-Sturm & Keller's Shearer 1, machine.

REAGAN COUNTY—Beasley et al's Sawyer 1, rig. Big Lake Oil Co.'s University 179 (deep test), dr 2790 ft; University 1-C, fsh rotary cutters 8497 ft; University 2-C, flow 659 bbls 56 gravity oil and 13,147,000 ft gas 8232 ft; University 3-C, dr hard lime 8545 ft; University 4-C, flowing 135 bbls 58 gravity oil and 5,197,000 ft gas, td 8220 ft. Group One & Conoco's University 2-B, dr shale 7176 ft; University 3-B, dr shale 5385 ft. A. M. Hagan-J. W. Emch & Amerada's Sawyer 1, dr 210 ft.

REEVES COUNTY—Slack & Fink's Brooks-Huling 1, elev 3116 ft, sd 1827 ft.

RUNNELS COUNTY—Geo. W. Boyce & Lamar's Lange 1, elev 1844 ft, co 2504 ft. Gibson & Johnson's Johnson 1, dr 1620 ft.

SCHLEICHER COUNTY—Delmar Oil Co.'s O'Harrow 1, ur 2635 ft. Phillips Pet. Co.'s J. A. Whitten 1, elev 2333 ft, fsh 6100 ft. Munger-Wilson Oil Co.'s Page 1, elev 2270 ft, dr 2970 ft. Paul Teas & Walter Gant's G. C. Allison 1, rig.

SCURRY COUNTY—J. G. Armand & Camp Springs O&R Co.'s Quinn 1-A, elev 2316 ft, fsh 4080 ft. Byrd & Harmon's Murphy 1, co 1732 ft. Pender O&G Co.'s Davis 1, co 4330 ft. E. L. Smith Oil Co. & Magnolia's Mooar 1, elev 2519 ft, top salt 750 ft, dr 4160 ft. Transcontinental & Vacuum Oil Co.'s Peckham 1, elev 2155 ft, fsh 525 ft.

TAYLOR COUNTY — Condor Pet. Co.'s Stoker 1, dr 2090 ft. A. H. Gibson et al's M. E. Cody 1, dr 1470 ft. J. B. Jameson et al's Webb 1, elev 1905 ft, dr 5630 ft. Mid-Continent Pet. Corp.'s Lindsey 1, rig. Hucony Oil Co.'s Richie 1, lcn. Owen-Sloan Oil Co. & Gibson-Johnson's Bingham 1, dr 1300 ft.

TERRELL COUNTY—Big Bend Oil Corp. & F. A. Book's Bassett 1, elev 2396 ft, dr shale 1560 ft. Transcontinental's Good 1, elev 2405 ft, fsh 3030 ft.

TERRY COUNTY — Penn Oil Co. Unit Plan's P. Carlisle 1, dr 2365 ft.

UPTON COUNTY—TP Coal & Oil Co.'s Belcher 1, elev 2684 ft, top salt 1310 ft, top lime 3602 ft, sd for pipe with hfw 3755 ft.

VAL VERDE COUNTY—A. Blue et al's J. P. Yoas 1, lcn. Phantom Oil Co.'s Ingram 1, dr 2610 ft.

WARD COUNTY—Alpine Oil & Dev. Co.'s Dakan 1, co 2210 ft. C. C. Dorr & Atlantic's Dorr-Costley 1-A, elev 2493 ft, top salt 1990 ft, top lime 2200 ft, flowing oil by heads 2612-14 ft. Gulf Prod. Co.'s Hutchings 3, elev 2659 ft, top salt 1035 ft, pb from 3095 to 3089 ft and flowed 90 bbls oil 12 hours; Hutchings 4, dr 400 ft; O'Brien 8, dr 1180 ft. Otto Kirkham et al's E. S. Boogher 1, lcn. R. F. Owen et al's Johnson 1, sp and sd. Penn Oil Co. & Atlantic's Bennett 2, swab 35 bbls after shot twice, pb from 2630 to 2625 ft. Sid Richardson-Kelsey & Magnolia's O'Brien 1, elev 2655 ft, top salt 1230 ft, top lime 2388 ft, flowing oil by heads at 2555-2678 ft. Shell Pet. Corp.'s Sloan-Owen 1, top salt 765 ft, swab oil and water, dr brown sandy lime 4340 ft. Shipley Oil Corp.'s Hayzlett 4, dr 2880 ft. J. E. Smith et al's Clements 1, sd 560 ft. Sturm & Paine's Cummins 1, elev 2443 ft, top salt 780 ft, sd, slowed 70 bbls oil by heads, td 2350 ft. Southern Crude Oil Pur. Co.'s Hill & Hill 1, elev 2316 ft, top salt 2223 ft, dr hard grey lime 2760 ft. Sun Oil Co.'s Sealy 1, elev 2680 ft, sd 2555 ft. Tex-Oil Production Co.'s Redman 1-A, elev 2717 ft, top salt 1290 to 4133 ft, dr 4530 ft.

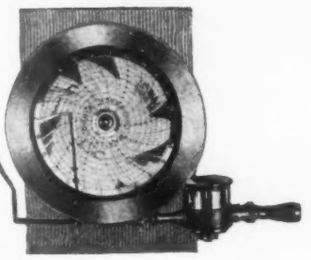
WINKLER COUNTY—Sun Oil Co.'s Sealy 2, elev 2713 ft, top salt 2995 ft, top lime 3110 ft, sd hfw 3284 ft.

SOUTHWEST TEXAS

ATASCOSA COUNTY—Frontier Oil Co.'s Gray 1, lcn.

BASTROP COUNTY — Abernathy et al's Aldridge 1, sd below 2300 ft. Batts et al's Alexander 1, no report. Gulf's Bell 2, no re-

MARTIN-DECKER AUTOMATIC RECORDING WEIGHT INDICATOR



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port. Kate et al's Lackey 1, dr 2240 ft. Superior Oil Co.'s Lasher 2, ru.

BEXAR COUNTY—Dingman's Kelso 2, (650 ft north of No. 1, four miles from city limits of San Antonio near Pleasonton road) dr 213 ft; Coffey 1, (one and one-fourth miles southwest No. 1 Kelso near Applewhite road) dr 110 ft. Penn Tex Oil Co.'s Dobrowolski 1, dr 560 ft; Dobrowolski 2, dr around 600 ft, both wells show large amount of gas, estimated at 500,000 cubic ft, also some oil. Swearingen Oil Co., Fee 1, (Dobrowolski pool) prod. 7 bbls at 710 ft.

BEE COUNTY — Humble's McKinney 2, (600 ft se of No. 1) ru. Union Prod. Co.'s Ray 7, (600 ft sw of McKinney 1) shut down, set 346 ft of 10-inch cas; Ray 8 (600 ft sw of McKinney 2) ru. Houston Oil Co.'s Portis 1, (200 nwl 200 nel) coring 3908 ft. E. Price's Weiss 1 (2640 ft out of n cor of tract) ru. Rowan & Tongs' Freeland 1, (150 ft sel. center of tract) dk. Fisher & Wiggins' (Grayburg Oil Co.) Kimball 1, (center of tract) dr 2460 ft black shale. Nickols et al's Hicks 2, (300 ft se of No. 1) dr 2034 ft shale and ash. Tested gas at 1940 ft. Morgan et al's McKinney 1, (north of Pettus, 3160 ft from w line, 300 ft s line) shut down 1455 ft fuel.

BROOKS COUNTY — Houston Oil Co.'s Holbein-Wormser 1, dr at 5334 ft, tested dry at 3949-53 ft. Humble's Singer 1, sec 312 ft dr at 4509 ft.

CALDWELL COUNTY—S. Corgill's Lynch 1, dr about 1600 ft. Cranfill-Reynolds Co.'s Strawn 1, prod abt 15 bbls daily, set casing abt 1710 ft; Strawn 2, prod 10 bbls daily, casing at 1801 ft. Humble's Briscoe 5-T, dr. Keene et al's McNeill 1, dr around 2270 ft. Morgan et al's Perry 1, (¾ mi ne salt flat field) dr at 1530 ft. Trinity Drillers' McMullen 1, dr 2021 ft.

DE WITT COUNTY—Republic Prod. Co.'s E. T. Clark 1, (four miles s of Yorktown) moving on. Shell's Hartman 1, sd at 2200 ft.

DUVAL COUNTY—Bain and Shaw's Benavides 1, ru. Buckner et al's ePters 1, csg set at 1585 ft, prod 15,000,000 cu ft gas, bottom of hole at 1703 ft. Callahan and Howard and Smith's Luby 1, sec 24, prep to spud. Cole Pet. Co.'s Benavides 68, blk 11, Sec. 14, dr at 2750 ft, showed salt water, gas and oil 2642-50 ft. Humble's Kohler 43, casing set at 1744 ft, testing at 1750 ft; Kohler 44, Sec. 424, prep to spud. Long et al's Hahl 5, standing at 2415 ft. National Oil Co.'s Ball 2, dr 3635 ft; Peters 1, dr 1600 ft. Simms Oil Co.'s Dinn 9, to spud in. Southern Crude Oil Purchasing Co.'s Dinn 1, Sec. 480, prep to spud. Everett Suladies' Peters 1, Sec. 33, reported sd at 2777 ft.

FAYETTE COUNTY—Mouldoon O&G Co.'s Kerr 1, resumed dr abt 2250 ft.

FRIO COUNTY — Lefevre et al's Eschenburg 1, dr around 2650 ft. Dr. F. L. Thomson's Tribble 1, dr about 1200 ft.

GONZALES COUNTY — Adams & Lyles' Reed 1, dr. Antibus & Cummings' Martin 1, (8 mi from Gonzales) dr below 510 ft, oil showing. Acme Oil & Royalty Co. (Emmick), Weber 1, dr below 2400 ft. Fitzsimmons et al's Huber 1, dr at 2662 ft. Mardon Oil Co.'s (Finnell and Elam) Robinson 2, dr 500 ft; Borer 1, dr about 1800 ft.

GOLIAD COUNTY—Humble's Lackey and Weldon 1, (2000 ft swl and 2000 ft sel) shut down 600 ft. Morgan et al's Ray 1, (300 ft swl and 300 ft sel) dr 4215 ft shale oil show.

GUADALUPE COUNTY — Clemens-Trinity Drillers' White 1, spud in. Cranfill-Reynolds' Appling 2, prod. 450 bbls at 2450 ft, casing set just above that depth. Empire Gas & Fuel Co.'s Knoblock 1, casing set at 2518 ft, prod. 6500 bbls oil at 2590 ft; Henry Willie 1, no report; Dowdy 3, lcn; Dowdy 4, lcn. Gulf's Moaler 1, prep to spud in; Tadlock 2, spud in; Wilson 1 (just north of Roamel gusher), dk. Humble's Denman 11-A, prod around 750 bbls oil at 2632 ft, casing set about 2600 ft; Denman 12-A, prod. about 800 bbls oil at 2590 ft, casing set at 2578 ft; Yates Wilson 4, dr around 800 ft. Magnolia's Echols 3, dr; Mrs. M. E. Roamel 1, prod 41,928 bbls oil from crevice in Austin Chalk and Edwards lime below 2320 ft, casing set at 2317 ft; Mrs. M. E. Roamel 2, (direct south offset to No. 1) skidding derrick from No. 1; Mrs. M. E. Roamel 3, (direct west offset to No. 1) dk; T. Dix 8, (replacement hole for No. 7) spud in; S. M. Roamel 1, no report. Sun Oil Co.'s Knoblock 6, dr around 2500 ft; J. Q. Manford 2, (direct east offset to No. 1), prep to spud in. The Texas Co.'s Dallas Wilson 6, prod 1380 bbls around 2600 ft; Knoblock 5-A, dr around 2300 ft. Dr. F. L. Thomson's Posey 1, dr. Tidal Oil Co.'s Seligman 1, (H. J. Williamson sur), dk. Thurman et al's Talley 1 (St. Charles) dr around 3890 ft. United North & South Oil Co.'s Thomas Dix 3, (east offset to Magnolia-Roamel gusher) ru; Thomas Dix 4,(southwest offset to Magnolia-Roamel gusher) ru.

KARNES COUNTY—Hewitt et al's Matula 1, dr abt 1000 ft. Hurador Pet. Co.'s Porter 1, dr 3710 ft. Morgan Oil Corp.'s (Ruby and Claypool) Zepeda 1, dr about 2972 ft.

KERR COUNTY—Mach et al's Love 1, ru.

KENDALL COUNTY—Borget et al's Willie Haag 1, dr at 800 ft. Dixon et al's Behr 1, dr about 620 ft. Seaboard Oil Co.'s Askey 1, dr 425 ft.

KINNEY COUNTY—Blume et al's Herbst 2, dr about 300 ft. Mardon Oil Co.'s Clamp 2, dr about 350 ft.

LA SALLE COUNTY — Salt Lake City Prod. Co.'s Beckwith 1, Sec. 16, still fishing around 2900 ft.

LIVE OAK COUNTY—Houston Oil Co.'s Boothe 1, ru.

MAVERICK COUNTY — Johnson et al's Wippf 1, standing at 1600 ft. Rycade Oil Co.'s Chittim 5, Sec. 129, standing full of salt water at 3415-52 ft; Chittim 6, Sec. 116, dr about 1700 ft; Sullivan 5, Sec. 82, dr about 2810 ft.

MEDINA COUNTY—T. N. T. Drlg. Co.'s Irrigation 5, set 10-inch casing at 100 ft, resumed dr. Pat Armstrong's Crawford 1, spud in. Pan American Pet. Co.'s Hart 1, spud in. Pure Oil Co.'s Fohn 1, coring below 1682 ft.

McMULLEN COUNTY — Southern Crude Co.'s Baker 1, Sec. 4, dr below 2810 ft.

NUECES COUNTY—Allied Gas Co., dr Graham, Wallace, Yeagley and Patton's Wallace 1, dr. Grimm et al's Roberts 1, dr, no report on depth. Houston Oil Co.'s M. E. Brooks 1, dk.

REFUGIO COUNTY — Blanco Creek Oil Co.'s Damon 1, (Bonnie View Ranch) Sec. 16, dr. Korona Oil Co.'s Zarsky 1, blk. 91, prod. 700 bbls oil through two 9-/16 chokes at 3696 ft, casing set at 3688 ft. Dixon et al's 1, Sec. 37, (Bonnie View Ranch) dr. Hamil Drilling Co.'s Cable 1, dr around 2500 ft. Herman Heep Oil Co.'s Vance 2, moving on. Heflin et al's Heard 1, large gasser, showing some oil at 3682-3700 ft, casing set at 3680 ft. Edwin M. Jones' Heard 1-A, working over to complete as larger well, made some oil at 3680 ft, casing set at 3673 ft; Jetter 1-A, casing set at 3695 ft, tested salt water at 3707-10 ft, being drilled deeper. Houston Gulf Gas Co.'s Lambert 2, dr below 4716 ft; Morgan-Vance 3, dr abt 3172 ft; Morgan-Shelly 3, dr 2913 ft; Lambert 3, prep to spud. Houston Oil Co.'s Shelton 1, blk 190, prod 416 bbls through ¼ and ⅝-inch choke with 8¼-inch casing set at 3671 ft, bottom of hole at 3683 ft; Dorsey 1, blk 78, casing set at 3676 ft, tested salt water, being plugged back for another test; Rooke 14, dr at 3420 ft; Tom Heard 1, blk 16, dr at 4830 ft; Doughty 1, dr around 4500 ft; Fannie Heard 9, dr 3820 ft; Leisering 1, dr abt 1700 ft. Independent O&G Co.'s West 3, dr at 2700 ft. Shelly 1, temp abn at 5493 ft, casing set at 5481 ft; Mercy Academy 1, dr around 3660 ft; Helen Reilly 1, casing set at 3689 ft; Claude Heard 3, flowing 1500 bbls oil through two ⅝-inch chokes at 3696 ft, set casing at 3689 ft; J. B. F. Heard 1-C, dr below 4100 ft; M. F. Lambert 1, ru; Claude Heard 4, dk; Claude Heard 5, dk; O'Brien 1, to plug back for test, bottom of hole at 6489 ft (this is old well.) Luling O&G Co.'s Fannie Heard 1, casing set at 3681 ft; 700 bbls through ¼-inch choke at 3701 ft; Fannie Heard 2, ru. Mission Drilling Co.'s Moss 1, blk 110, testing at 5490 ft; O'Brien 1, dr around 5210 ft. Morgan Oil Corp.'s Fox 1, blk 70, casing set at 3677 ft; Rooke 1, report abn at 5924 ft; Powers 1, dr about 5426 ft. Pearson Properties' Ryals 1, set 6⅝-inch casing at 5474 ft, flowing 1160 bbls oil on one-inch choke at 5478-82 ft; Johnson 1, dr 1642 ft. Price et al's Mission 1, dr, no report on depth. Rutherford-Traylor Oil Co.'s Cable 1, spud in. Sexet Oil Co.'s Ryalls 2, ru; Cable 2, dk. Stroube and Stroube's T. W. McGuill 1, blk 3, dk; Cable 1, dr about 3675 ft. Sun Oil Co.'s Buckley 1, blk 2, working over, casing set at 3670 ft. Texas Co.'s Shelton 1, report abn at 6050 ft. Union Producing Co.'s Shelton 1, ru to set casing after blowout at 5550 ft; Rose Lambert 1-A, 5-3/16-inch casing set at 6475 ft; 8¼-inch casing set at 5245 ft, wait on cement; O'Brien 3, dr about 1823 ft; Powers 3, dr, no report on depth; Shelly 4, dr 2342 ft; Lambert 2, dr 4312 ft; O'Brien 4, dr 2280 ft; Mitchell 3, ru; Mitchell 4, dk; Powers 4, dk. Wheatcroft et al's 1, blk 51, ru.

SAN PATRICIO COUNTY—George Pickett's J. C. Baldwin 1, (5½ miles east of Sinton), dr about 1300 ft. La Ferria Oil and Gas Co.'s Smith 1, sd, casing set at 2246 ft, tested salt water, no additional information available.

STARR COUNTY — Mrs. J. L. Smith's Welch 1, dr, no data on depth. Texas Co.'s Guerra 1-A, dr 2850 ft.

UVALDE COUNTY — Phamton Oil Co.'s Claudt 1, dr 525 ft. Weldon and Welch's Benson 1, attempt to shut off water abt 960 ft; Edmonds 1, dr around 890 ft.

VICTORIA COUNTY — Humble's Welder 3-A, suspended drilling for orders at 6275 ft, showing of oil and gas, may make test. Lion Oil Co.'s McFadden 1, lcn.

VAL VERDE COUNTY—A. Bluhm's J. P. Yoas 1, blk 3, Sec. 31, dk. Phamton Oil Co.'s Ingram 1, cemented casing at 2540 ft, shut down at 2551 ft. Transcontinental Oil Co.'s Good 1, dr, no depth available.

WEBB COUNTY — Claggett and Evans' Webster 1, Sec. 684, prep to spud. Houston Oil Co.'s Benavides 2-D, dr; Perez 1, dr. O. W. Killam's Bruni 18, Sec. 9, set casing at 3002 ft; Bruni 1, blk 33, tested salt water at 2532 ft, now fishing at 2586 ft. George Marshall's Webster 2, Sec. 684, show oil, gas and sand at 2639-49 ft, to deepen. Wilkins Seacord's S. Benavides 1, Sec. 74, dk. South Texas Prod. Co.'s Perez 1, Sec. 667, dr at 1700 ft.

WILLIAMSON COUNTY—Fred Beatty's Pumphrey 1, prep to spud in. Birdwell et al's Martin 1, prep to spud in. Champan et al's McConnell 1, ru; Abbott 1, dk; Fuch 2, dr about 1500 ft; Fuch 3, spud in; Laurence 1, spud in. Edwards and Associates' Abbott 1, dr. Harlem et al's Stiles 1, spud in. Keeshan et al's Abbott 1, dk. Lightfoot et al's Fletcher 1, dr about 1400 ft. Estell et al's McConnell 1, prep to spud in. C. P. Link's Simmons 1, blew in unexpectedly at 1498 ft, mudded in and will complete as producer. Marts et al's Abbott 1, good oil showing around 1400 ft. McNeal's Abbott 1, dr around 400 ft. Peterman et al's Abbott 1, spud in. Simms Oil Corp.'s Laurence 1, dr around 2150 ft. Scroyners et al's Laurence 1, dr abt 600 ft. Southern Prod. Co.'s Martin 1, dk. Taylor Temple Oil Co.'s Martin 1, prep to spud in. Tomlinson et al's Martin 1, dk; Martin 2, dk. Westheimer et al's Abbott 1, showing of oil abt 1420 ft. Wilder et al's Martin 1, spud in.

WILSON COUNTY—Empire's Shook 1, sd at 3710 ft.

ZAPATA COUNTY — Blankenship et al's Garza 2, dr at 1305 ft; Montemayor 2, standing at 500 ft. Dr. Edgington's Trevino 1, Sec. 412, prod. 160 bbls at 1251 ft, casing set at 1238 ft; Trevino 2, Sec. 412, set casing at 1226 ft. O. W. Killam's Cuellar 17, dk; Cuellar 21, dr around 1450 ft; Cuellar 14-B, Sec. 277, dr at 350 ft. Livingston and Twiss' Trevino 1, Sec. 66, blk 7, dr around 1005 ft. Magnolia's Cuellar 3, Sec. 245, dr at 1697 ft, now at 1420 ft. Moore and Moore's Flores 1, blk 99, lcn. National Oil Co.'s Adams 1, standing at 670 ft, running water lines. B. F. Nixon's Guiterrez 1, blk 8, lot 5, lcn. Reese & Shankle's Guitterrez 1, (Associated lease) dr around 350 ft. South Texas Production Co.'s Measles et al 9, (Cerrito Blanco grant) ru. John Pappas' Cuellar 2, Porcion 24, flowed salt water at 1890 ft, casing 1675 ft, worknig over, no further information.

ZAVALLA COUNTY—Pryor et al's Campbell 1, dr around 1500 ft. Southern Crude Oil Co.'s Washer 1, dr abt 3218 ft. Weigand Bros.' Gates 1, dr below 1920 ft. Texas Gas Fuel Co.'s Matthews 1, dr below 1350 ft.

CENTRAL EAST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
ANDERSON COUNTY—		
Magnolia Pet. Co., E. F. Williams 2	*	4685

ANDERSON COUNTY—Humble O&R Co.'s W. Johnson 1, Jas. Hall sur, Pecan chalk 2908 to 3025 ft, top Austin chalk 3200 ft, dr chalk 3340 ft. W. H. Roeser & Roeser-Pendleton,

Inc.'s W. L. Moody 1, Jas. Welch sur, elev 349 ft, Austin chalk 4067 to 4422 ft, coring sand 4807 ft. Sun Oil Co.'s Bowers-Maier 1, E. G. Meyers sur, elev 306 ft, crooked hole 998 ft.

CAMP COUNTY—J. C. Rogers et al's Enfield 1, dr 2000 ft.

DELTA COUNTY — W. H. Goodnight & Bob Baker's Simms-Smith 1, lcn. Geo. Kean & J. B. Evans' Smith 1, J. B. Anderson sur, elev 506 ft, sd 1830 ft.

ELLIS COUNTY—G. C. Foster & S. C. Richardson's Moise-Cerf 1, La Pena sur, elev 440 ft, top Austin chalk 531 ft, dr 1420 ft.

FANNIN COUNTY—Ed. V. Parsons et al's Morgan 1, J. E. English sur, elev 668 ft, dr 2260 ft.

FRANKLIN COUNTY—Harper & Byers' H. A. Laws 1, E. S. Rogers sur, dk.

FREESTONE COUNTY — Cranfill-Reynolds Co.'s W. E. Bonner 1, S. T. Ballour sur, dr 2550 ft. Haley & Young's Pierce-Worthy 1, J. L. Chavert sur, sp and sd. O. W. Killam-Phillips et al's R. H. Edwards 1, A. Sanchez sur, elev 402 ft, rig. C. F. Lytle et al's Holt 1, D. Avant sur, elev 469 ft, top Austin chalk 3906 ft, dr 4685 ft. Penn Oil Co.-Dixie Oil Co. & J. R. Black's B. M. Burgher 1, C. Chamar sur, elev 401 ft, dr shale 2830 ft.

HENDERSON COUNTY—H. B. Ashburn et al's T. E. Berry 1, Arron York sur, dr 510 ft. E. L. Chapman et al's Cade 1, Simon Weiss sur, dr 2190 ft. Cranfill-Reynolds Co. & La. Oil Ref. Corp.'s J. W. Broome 1, Sam Chears sur, top Pecan chalk 2695 to 2890 ft, dr Austin chalk 3860 ft. Shell Pet. Corp.'s S. T. Stephens 1, I. D. Owen sur, sp.

HOPKINS COUNTY—L. H. Wentz et al's S. Millhollen 1, J. Simpson sur, rig.

HUNT COUNTY—Allen & D. Hager's J. C. George 1, E. Tidwell sur, rig.

LAMAR COUNTY—B. L. Laubenheim et al's Johnson 1, Wm. Driggers sur, elev 667 ft, sd 3090 ft.

LIMESTONE COUNTY — Haley & Heeman's D. Wilkes 1, J. Breeding sur, sd 690 ft.

MORRIS COUNTY—Geo. McCamey et al's P. M. Staggers 1, G. Forbes sur, sp and sd.

RAINS COUNTY — D. H. Byrd & Owen-Sloan Oil Co.'s J. D. Hill 1, Friend-McMahan sur, rig.

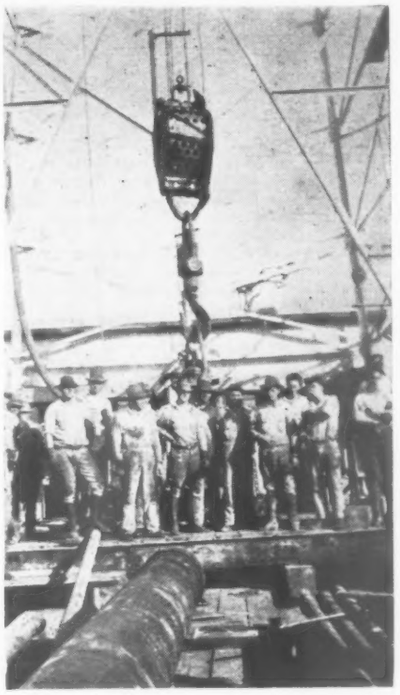
RUSK COUNTY—E. M. Joiner et al's Bradford 3, sd 2530 ft. Magnolia Pet. Co.'s Duran-Wylie 1, Aquilla Norris sur, elev 431 ft, dr shale 2590 ft.

SMITH COUNTY—East Texas Pet. Corp.'s Peoples Bank 1, John McFadden sur, elev 465 ft, Austin chalk 3008-3190 ft, sd 3375 ft. E. L. Chapman & A. M. Sutton's J. M. Hammon 1, Jas. Reid sur, sd 1495 ft. Frank Foster et al (was Deep Rock Oil Co.'s) Bowdoin 1, M. V. Lout sur, elev 434 ft, top Pecan chalk 3338 ft, dr shale 4080 ft. Owen-Sloan Oil Co. & R. H. Davis' J. H. Starnes 1, J. W. Allen sur, sd 1322 ft. O. M. Rector et al's M. Dozier 1, Mathew Maise sur, lcn

TITUS COUNTY—Wainwright-West Oils, Ltd. (W. L. Murrell & Geo. M. Anderson's) Walcott & Lott 1, D. M. Smith sur, dr 2300 ft.

VAN ZANDT COUNTY—Central Oil Co. et al's S. J. West 1, A. C. Walters sur, elev 564 ft, top Austin chalk 3900 ft, dr chalk 4015 ft. Cranfill-Reynolds Co.'s Alexander 1, J. Burleson sur, dk. W. T. Daniels et al's Fannie Cumby 1, John Wright sur, rig. Dennis Oil Corp., et al's C. W .Morris 1, C. L. Morrison sur, dr shale 2100 ft. Manley-Sprinkle' & Evans' Dr. B. C. Andrews 1, M. Neal sur, sd 108 ft. Hertt Pet. Co.'s L. H. Cox 1, A. C. Nugent sur, dk. Roy Jenkins et al's J. H. Cox 1, S. P. Ry. sur, lcn. Pandem Oil Corp.'s R. L. Brin-Gibbard 1, Ray Sunigas sur, sp and sd. Arthur H. Ray & Ward Powell's A. J. Berry 1, Nacogdoches Co. sur, top Pecan chalk 2591 ft, dr shale 2840 ft. Texas Chief Oil & Royalty Co.'s J. P. Foster 1, F. Montgomery sur, sp and sd. Van Zandt Oil & Dev. Co.'s Sharp-Robinson 1, J. B. Ybarbo sur, top Pecan chalk 2764 ft, dr 2940 ft. Upchurch et al's Owlet Green School, dk.

VAN ZANDT COUNTY (Van Field)—Central Oil Co.'s Peters 1, dk. Cranfill-Reynolds Co.'s Coker-Ledbetter 1, dr 210 ft; A. D. Clark strip 1, materials. Humble O&R Co.'s W. Freeman 1, dr shale 2450 ft. Pure Oil Co.'s Cannon 1, rig; Clark-Houston 1, dr 330 ft. R. C. Crim 1, pb from salt water at 3082 to 3037 ft; Ellison 1, dr 1630 ft; D. R. Howell 1, testing production 2885 ft; Jarman 2, coring sand 2540 ft; Jarman 3, dr 300 ft; Jarman 4, dr 350 ft; Leonard 1, dr 400 ft; Thompson 2, coring



Two drilling crews and carpenters on Rycade-Humble's Atchafalaya Fee 5, Bayou Bouillon, St. Martin Parish, Louisiana, which recently extended production of that area

sand 2550 ft; Thompson 3, dr 310 ft; A. B. Tunnell 1-A, dr 240 ft; Tunnell 2-A, rig; R. L. Wells 1, dr 2010 ft; Wells 2, dr 410 ft; Pure & Hill & Hill's Peters 1, cem cas top sand 2655 ft. Shell Pet. Corp.'s B. M. Fowler 1, completing 2605 ft; Fowler 2, dr 560 ft.

WOOD COUNTY—Big Indian Oil & Dev. Co. & Tidal Oil Co.'s R. J. King 1, W. M. Barnhill sur, sp and sd. Gulf Prod. Co.'s N. E. Carver 1, Wm. Kern sur, top Pecan chalk 2870 ft, dr shale 4300 ft. Westexas Oil & Royalty Corp. & Owen-Sloan Oil Co.'s Negro Orphanage 1, Chas. E. Rivers sur, elev 361 ft, top Pecan chalk 3043 ft, sd 3132 ft.

EAST TEXAS

CAMP COUNTY—Rogers et al's Enfelt 1, Montgomery sur, dr shale 1970 ft.

FRANKLIN COUNTY—Harper Byers Oil Co.'s J. C. Laws 1, Rogers sur, dk.

HARRISON COUNTY — Shell Rock Pet. Co.'s Daugherty 1, W. W. Burris sur, set 10-inch cas 185 ft, sd repr boiler, td 1360 ft.

MARION COUNTY—A. A. Trammell, Tr.'s Hussey 1, Lockhart sur, dk pat. Davidson et al's Chatten 1, Grayson sur, topped chalk 1960 ft, dr chalk rock 2340 ft.

MORRIS COUNTY—Tucker & Fullwood's Henderson 1, J. C. Riddle sur, dk.

RED RIVER COUNTY—E. L. Chapman's Norris & Guest 1, Larkin sur, dk. D. M. Buffington's Hoosier 1, Hughart sur, sd 2365 ft. Shad Harper's Garland 1, Wagley sur, sd 1862 ft. Johnson Pet. Co.'s Randolph 2, Dean sur, sd 2182 ft.

SHELBY COUNTY — Chapparral Oil Co.'s Holt 2, Matthew Moore sur, sd 3004 ft. Benedum & Trees' McCann 1, Nancy Beattie sur, set 9-inch cas 2762 ft, dr 3325 ft .

TITUS COUNTY—Canadian Oil Co.'s Walcott 1, D. N. Smith sur, set 10-inch cas 40 ft, dr 1620 ft.

TEXAS GULF COAST

AUSTIN COUNTY—Jas. T. O'Hara's Batla 1, 2 mi nw Raccoon City, dr 3900 ft shale. Black Oil Co.'s Lancashire 1, 3 mi s Sealey, dr 2890 ft gbo. McInnery & Harris' Hattie McDade 1, Jno. Martin sur, sd 500 ft. Empire's J. T. Boyd 1, San Felipe, dr 925 ft.

BRAZORIA COUNTY—Thos. Faust et al's Fee 6, 2 mi s Nash dome, dr 4000 ft sand and lime. Shell's Blakely-Winston 1, 2 mi ne Danbury, set 9⅝-inch cas at 4775 ft over oil sand. Rycade's Wisdom 26, Nash, dr 5975 ft. Rycade & Amerada's Rapid City 1, 2 mi s Danbury, ru. Rucks & Patterson's Hunter 1, sw Hoskins Mound, sd 1180 ft. The Texas Co.'s O. F. Ewing 1, Manvel area, dr 2000 ft. Mills Bennett Prod. Co.'s Randon 1, Allen Dome, dr 425 ft.

CHAMBERS COUNTY — Pure's W. F. Mayes 10, Lost Lake, swabbing at 2815 ft; Mayes 11, ru; Lost Lake 4, dr 4375 ft hard lime; Kirby 1, Cove, lcn. Shell's Herff 1, Moss Bluff, dr 2050 ft shale. Superior Oil Co.'s H. Jackson 1, 4 mi w High Island, ru.

FORT BEND COUNTY — Gulf's Brazos Valley Irrig. Co. 1, 3 mi sw Clodine, abn at 6050 ft in shale; Moore 21, Moores Field, dr 550 ft gbo; J. M. Moore 22, lcn. Pure's Jackson Brown 1, 5 mi e Long Point, dk.

HARRIS COUNTY—Humble's Simms-Smith 77, Goose Creek, set 9⅝-inch cas at 5800 ft over oil and gas sand; Warren 7, Hockley, dr 4850 ft hard sand; Minnetex 2, Mykawa, stdg; Siadous 1, set screen at 4933 ft, came in making gas and 38 gravity oil at rate of approximately 50 barrels daily. Watts Drlg. Co.'s Hubert 1, Mykawa, td 5525 ft, may plug back to test. Higgins O&F Co.'s Siadous 1, Mykawa, dr 6325 ft shale. Mrs. J. C. Baldwin's Kitzman 1, 2 mi n Cypress, sd 4250 ft. Martin-Drake-James' Haney 1, e Elena, dr 3668 ft shale. Sloan Prospecting Co.'s Ulrich 1, 5 mi nw Barbers Hill, dr 3750 ft gbo.

JEFFERSON COUNTY—Gulf's Bordages 8, Fannett, dr 6450 ft shale and lime; Burrell 5, Fannett, dr 3475 ft gbo and lime; G. W. Junker 1-A, dr 4675 ft in sdtr hole. The Texas Co.'s Fitzhugh 1, Big Hill, set 6⅝-inch cas at 4975 ft; Pipkin 2, Big Hill, washing at 6010 ft. Bayou Oil Co.'s Hooks-Bordages 1, 2 mi s Voth, dr 2615 ft shale.

LIBERTY COUNTY—Gulf's W. H. P. McFadden 1, Moss Bluff, s side, lcn. Humble's Sabine Tram 1, Devers area, M. Whittington sur, lcn. Harrison Oil Co.'s Jamison 1, N. Dayton, tested salt water at 5050 ft, will sdtr. The Texas Co.'s & Paraffine Oil Co.'s Fee 1, N. Dayton, dr 3510 ft sand and lime. Houtex Prod. Co.'s Brown & Tadlock 1, N. Dayton, fsh 3890 ft. Gulf's Weiser 1, Hankamer, dr 6575 ft shale; Boyt 4, Hankamer, ru; Boyt 5, ru. Cranfill-Reynolds Co.'s Moores Bluff Corp. 2, Esperson dome, set cas at 2282 ft to test; Esperson 8, came in flowing 1800 bbls 22.5 gravity oil daily at 3290 ft; Esperson 9, lcn. Yount-Lee Oil Co.'s Moores Bluff Corp. 2, Esperson dome, set screen at 3340 ft, preparing to pump.

MATAGORDA COUNTY—Cockburn et al's Hawkins 1, Shepherds Mott, dr 4850 ft shale.

ORANGE COUNTY—Gulf's W. H. Stark 1, Port Neches, ru. The Texas Co.'s Kuhn 2, Port Neches, ru; Stark 2, ru.

WALLER COUNTY — W. P. Morris' Chap-Smither 1, ne Huntsville, dr 3075 ft shale. Joyce Richardson et al, Smither 1, 12 mi n Huntsville, ru. Geo. Hindman et al, Delta Ld. & Lbr. Co. 1, 3½ mi w New Waverly, sd 1200 ft.

WALLER COUNTY—W. P. Morriss' Chapman 1, 6 mi n Hempstead, sd 2075 ft. Kirby Pet. Co.'s Davis 2, San Felipe, dr 225 ft shale. Humble's R. Hardy 1-B, e edge Raccoon Bend, lcn.

WASHINGTON COUNTY — Anderson et al's Hughes 1, 3 mi n Chapel Hill, sd 3450 ft. L. O. Gleason's Nowak 1, near Brenham, dr 1560 ft shale. W. B. Birdwell's Schram 1, 3 mi e Brenham, dr 1840 ft shale.

SOUTH LOUISIANA

Completions

ACADIA PARISH—
Chas. P. Seiss, Abshire 1, 1 mi w Crowley . . . . . * 5120

ACADIA PARISH — Yount-Lee Oil Co.'s Houssiere-Latrielle 8, Evangeline, dr 6150 ft shale; C. O. & M. Co. 6, dr cap rock at 4600 ft. Chas. P. Seiss' Abshire 1, 1 mi w Crowley, abn at 5120 ft shale. The Texas Co.'s Rayne 5, s edge Evangeline field, dr 7503 ft sandy shale. Calcasieu Oil Co.'s Hayes 1, Sec. 10-8s-1w, dr 4335 ft gbo.

ASCENSION PARISH—Gulf's United Lds. Co. 17, Sorrento, abn at 4300 ft in salt; No. 18, lcn. McElroy Oil Corp.'s Lacey 2, 3 mi se Sorrento, sd 4070 ft.

CALCASIEU PARISH—J. O. Davis' Industrial Lbr. Co. 1, Starks, stdg 3775 ft. Gulf's

Lutcher-Moore 20, Starks, dr 1200 ft cap rock. Union Sulphur Co.'s Moss 1, wildcat near Lockport, dr 3425 ft sandy shale. Shell's Heyd 1, Iowa prospect, dk.

CAMERON PARISH—The Texas Co.'s Calcasieu Lake 5-A, S. Calcasieu Lake dome, dr 1175 ft gbo; State-E. Hackberry 6, plugged back to 3150 ft. Pure's Yount-Lee 9, Sweet Lake, dr 4450 ft sandy lime. Shell's Watkins 14, Black Bayou, dr 1032 ft lime. Vacuum's Cameron Meadows 1, e Johnson Bayou, fsh at 2930 ft.

IBERIA PARISH—The Texas Co.'s State Vermilion Bay 5, lcn. Jefferson Lake Oil Co.'s Lake Peigneur 5, Jefferson Island, dr 590 ft rock; No. 6, dr 100 ft.

IBERVILLE PARISH—Shell's Wilbert 4, White Castle, dr 3950 ft shale. Standard's Schwing 2, wo, Bayou Blue, dr 3300 ft sand; No. 4, dr 1800 ft gbo; Wilbert 6, Bayou Blue, dr 1600 ft shale. Standard's Cyrus Case 1, Bayou des Glaise, dr 2450 ft sand rock.

JEFFERSON DAVIS PARISH—Pure's Day 1, 1½ mi sw Welsh, sdtr 3300 ft.

LA FOURCHE PARISH — Gulf's City of New Orleans, dr 5975 ft sand.

PLAQUEMINES PARISH—The Texas Co.'s Garden Island Bay State 4, moving in material. L. L. E.-Leesville 1, lcn Sec. 27-21s-22e. Humble's Cockrell-Moran 1, T 20s-26e, preparing to dr deeper from 1740 ft after testing salt water; Lake Washington 1, 20s-26e, wo 4450 ft.

ST. LANDRY PARISH — Elbof Explorations' Ledoux 1, Eunice, sd 4360 ft. The Texas Co.'s Botany Bay Fee 5, Port Barre, came in flowing 1500 bbls at 3406 ft; No. 6, dr 3675 ft sandy shale. Gulf's Godet 3, Port Barre, dr 3465 ft sandy shale; W. H. Hoskins 2-A, dr 3335 ft rock. Hebert-Baker Oil Co.'s Fisher 1, sd 4000 ft.

ST. MARTIN PARISH — The Texas Co.'s St. Martin Ld. Co. Fee 1, Hager dome, dr 6615 ft water sand; No. 2, dr 5825 ft sticky shale; Iberville Land Co. 1, Hager dome, dr 6200 ft sand, no show. Yount-Lee Oil Co.'s Hebert Heirs 1, Anse la Butte, dr 5600 ft shale. Rycade's Bayou Bouillon 9, dr 3450 ft sand.

ST. MARY PARISH—Empire's Oscar Zenor 1, 2 mi n Patterson, dr 5550 ft shale. Pure's Wax Lake State 2, ru.

TERREBONNE PARISH — Chas. Paggi's Evergreen 2, Houma, sd 1800 ft. The Texas Co.'s L. L. E.-Bay Junop 1, lcn; Caillou Island 2, will test at 3260 ft; No. 3, lcn; State-Caillou Island 4, lcn; Four Isle 3, dr 1500 ft; Lake Pelto B-2, dk; Lake Pelto B-3, dr cap rock at 4500 ft; Bay St. Elaine 4, dr 2707 ft gbo; Lake Barre State 4, lcn; No. 5, lcn; No. 6, lcn; Dog Lake State 2-A, lcn.

NORTH LOUISIANA

Completions

BOSSIER PARISH (Cartersville)—		
H. L. Hunt et al, Peyton 4, 25-23-12	300	3160
Peyton 6, 25-23-12	600	3150
Muslow Oil Co., Kilgore B-2, 31-23-11	225	3129
Kilgore B-3, 31-23-11	250	3148
Kilgore C-1, 31-23-11	15	3167
Texas Co., Wilkinson 3, 31-23-11	450	3141
Wilkinson 4, 31-23-11	825	3154
DE SOTO PARISH—		
R. O. Roy, Farmer E-1, 5-13-13	2102	2882
WEBSTER PARISH—		
Magnolia, Denman 2, 1-22-11	30	2749

BIENVILLE PARISH—W. A. Nichols' McDermott 1, 28-18-6w, sp set 12½-inch cas 98 ft, dr 500 ft.

BOSSIER PARISH—Ark. Fuel Oil Co.'s Bolinger 2, 38-23-11, dr 2227 ft; Bolinger 3, 38-23-11, rig up; Bolinger 4, 38-23-11, rig up. Bahan & Bahan's Pleasant 1, 25-23-12, rig up; Mays 1, 26-23-12, plugged back to 2970 ft, wo cement to set, td 3180 ft. Askew & Goodman's Roberson 1, 25-23-12, dr 800 ft. Deleware La. Dev. Co.'s Bolinger 3, 38-23-11, old well, arr deepen; Bolinger 6, 38-23-11, dr 1650 ft. Lide et al's Matlock 1, 26-23-12, rig up; Farrington 1, 23-23-12, tested 2 mil ft dry gas 2713 ft, dr 2900 ft. Natural Gas Prod. Co.'s U. S. 2, 31-23-11, 2000 ft oil in hole 10 ft sand, wosr, td 3177 ft; U. S. 3, 31-23-11, lcn; U. S. 4, 31-23-11, lcn. Greenwood Prod. Co.'s Bolinger 1, 36-23-12, rig up to deepen. H. L. Hunt's Allen 1, 30-23-11, arr ds test 3104 ft; Peyton 5, 25-23-12, set 10-inch cas 350 ft; Peyton 4, 25-23-12, set 6⅝-inch cas 3148 ft 12 ft sand, flowing 300 bbls daily, td 3160 ft; Peyton 6, 25-23-12, set 6⅝-inch cas 3137 ft, 13 ft bro sand, flowing 600 bbls daily, td 3150 ft; Peyton 7, 25-23-12, lcn; Peyton 8, 25-23-12, rig up. Peyton 9, 25-23-12, dr 2200 ft; Peyton 10, 25-23-12, ds stuck 3100 ft. Woodley et al's L. & A. 2, 14-23-12, sd wo 3137 ft; Roberson 1, 22-23-12, sp ds 250 ft. Nell & Lanier's Biedenharn 1, 23-21-14, wosr 998 ft. Lanier et al's Le Rosen 1, 26-21-14, dk pat. Walker et al's Antrim 1, 28-21-13, sd 3184 ft. H. I. Morgan's Weatherbee 3, 21-19-11, dr 2076 ft. Muslow Oil Co.'s Barnett 1, 25-23-12, set 6⅝-inch cas 3135 ft, 750 ft oil in hole 12 ft sand wosr, td 3159 ft; Marks Meyer 1, 36-23-12, old well arr deepen, td 3088 ft; Kilgore C-1, 31-23-11, set 4½-inch cas 3150 ft, dr in with CT pumping 15 bbls, td 3167 ft; Floyd 1, 25-23-12, arr ds test 3149-59 ft, 10 ft sand, td 3165 ft; Peyton 2, 30-23-11, set 6⅝-inch cas 3135 ft, td 3148 ft; Peyton 3, 30-23-11, set 6⅝-inch cas 3130 ft, 8 ft sand tested dry 3149 ft, shot with 2 qts. nitro-glycerine, did not help, sd wo, td 3175 ft; Kilgore B-2, 31-23-11, set 6⅝-inch cas 3110 ft, 17 ft bro sand flowing 225 bbls oil daily, td 3129 ft; Kilgore B-3, 31-23-11, set 6⅝-nich cas 3130 ft, 16 ft bro sand flowing 250 bbls oil day, td 3148 ft; Kilgore A-2, 31-23-11, dr 2412 ft. Goodman-Johnson's Martin 1, 30-23-11, wosr 3169 ft. Magnolia Pet. Co.'s Matlock 2, 25-23-12, sp dr 50 ft; Matlock 3, 25-23-12, dk; Dodson 1, 16-23-12, arr ds test 3236 ft; Roberson 1, 26-23-12, coring hard sandy shale 3189 ft. La. Pet. Co.'s H. H. Bain 2, 31-23-11, dr 2900 ft; H. H. Bain 3, 31-23-11, coring 3120 ft. Texas Co.'s J. W. Peyton 2, 25-23-12, set 6-inch cas 3135 ft, will pump, est 15 bbls day, td 3120 ft; J. W. Peyton 4, 30-23-11, set 6⅝-inch cas 3133 ft, td 3148 ft; J. W. Peyton 5, 25-23-12, dk; J. W. Peyton 6, 30-23-11, dr 1940 ft; Wilkinson 3, 31-23-11, set 6-inch cas 3114 ft, 15 ft sand flowing 450 bbls day, td 3141 ft; Wilkinson 4, 31-23-11, set 6-inch cas 3130 ft, 18 ft bro sand, td 3154 ft; Wilkinson 5, 36-23-12, rig up. Tippett et al's Holmes 1, 36-23-12, tested 5 fourbles oil, 4 of mud in 10 min 3167 ft, 2 ft sand, setting 6⅝-inch cas. Lee Kinnebrew et al's Garrett 1, 36-23-12, cored 2 ft sand 3142 ft, no show oil or gas, arr deepen. Olsan Bros. et al's Pine Woods Lbr. Co. 1, 25-23-12, lcn. Phillips Pet. Co.'s Floyd 1, 25-23-12, rig up; Bolin 3, 30-23-11, coring 3115 ft; Bolin 4, 30-23-11, dr 1900 ft; Bolinger 1, 38-23-11, dk. E. W. Bateman's Bolinger 1, 38-23-11, rig up; Bolinger 2, 38-23-11, lcn. Eylers O&G Co.'s Wise 1, 35-23-12, dk. Haynes Bros.' Martin 1, 26-23-12, sp sd repr pumps, td 700 ft.

CADDO PARISH—Triangle Drilling Co.'s Hardy 1, 18-19-16, set 8-inch cas 1726 ft, 1 ft sand, td 1727 ft. C. W. Robinson's Wilson 1, 2-15-16, dr gumbo 2070 ft. I. N. Pharris' Oden 1, 19-19-14, set 6⅝-inch cas 2379 ft, td 2409 ft. R. W. Morton's Hill 1, 33-23-16, sd wo 4496 ft. Magnolia Pet. Co.'s Swann & Davis 1, 16-21-14, tested 6 joints sw 954 ft, coring 1002 ft. L. B. Mawk's Swann Bros. 1, 23-21-14, sp, dr 350 ft.

CLAIBORNE PARISH—El Dorado Chief Oil Co.'s Simmons 1, 27-20-7w, sd wo in shale and bldrs 2240 ft. Leue Oil Co.'s Taylor 1, 16-22-6w, lcn.

CONCORDIA PARISH—Joe Marr et al's Maxwell 1, 35-3-8e, claim oil sand, wo, td 1692 ft.

DE SOTO PARISH — Benson O&G Co.'s Harris 1, 6-10-13, set 6⅝-inch cas 3070 ft, sd wo 3650 ft. R. O. Roy's Farmer E-1, 5-13-13, set 6⅝-inch cas 2765ft, flowing 2102 bbls oil day through ¾-inch choke, td 2882 ft, 18 ft bro sand; Farmer B-1, 8-13-13, dk; Lee 1, 33-14-13, rig up; R. A. Nelson 1, 36-15-13, lcn. Ark. Fuel Oil Co.'s Scott 1, 32-14-13, rig up. Benedum & Trees' Johnson 1, 7-11-13, old gasser went dead, arr core, td 2865 ft.

FRANKLIN PARISH—Evansville Inv. Co.'s Welch 1, 2-14-8e, dr 3450 ft. Franklin O&G Co.'s O'Brien 1, 7-15-9e, sd repr rig, td 2501 ft. Davis et al's Moore 1, 12-11-6e, sd 1430 ft.

NATCHITOCHES PARISH—S. D. McDaniels' Clark-Morse 1, 23-5-6w, sd 2436 ft. Robeline O&G Co.'s Winn 1, 7-8-9w, sd in rock 1635 ft.

OUACHITA PARISH—J. L. Bullock, Tr.'s, West Va. 1, 25-18-5e, sd 2700 ft.

RAPIDES PARISH—Ayers Bros.' Wicklipp 1, 9-5n-2w, sd 2650 ft.

RED RIVER PARISH — W. D. Ball's Krumbholz 1, 32-14-10, arr ds test of 5 ft sand, td 1701 ft.

RICHLAND PARISH—Richland O&G Co.'s Singletary 1, 20-18-7e, set 9-inch cas 970 [illegible] Austin & McDonald's Millsaps 2, 17-17-6e, 2697 ft; Millsaps 3, 16-17-6e, sd 2477 ft; Millsaps 4, 16-17-6e, lcn; Millsaps 5, 8-17-6e, [illegible] Hunt 1, 13-17-5e, dk. W. C. Feazel's Land 1, 6-16-7e, dk. Shreveport Contractors' B 1, 17-15-7e, sd in black shale 2527 ft. International Gas Prod. Co.'s Lagrone 1, 7-16 lcn.

SABINE PARISH—F. A. Bartlett's Log 1, 27-10-12, lcn. J. C. McDaniels' Darby 16-8-12, dk pat. Sabine O&G Co.'s Anders 1, 19-8-12, shot formation, arr bail, td 2603 Benedum & Trees' Bowman-Hicks A-2, 3-7- set 8¼-inch cas 2390 ft, 280 ft oil in hole, td 2725 ft; Bowman-Hicks 3, 34-8-12, set inch cas 2339 ft, made 50 bbl head while dr ing in with cable tools, hfo, td 2357 ft; Bo man-Hicks 4, 34-8-12, rig up; Bowman-Hick 5, 34-8-12, set 8¼-inch cas 2355 ft, dr in 24 ft; Bowman-Hicks 6, 33-8-12, coring 2487 Bowman-Hicks 7, 4-7-12, coring 2504 ft. S bine Lbr. Co. 1, 34-8-12, set 8¼-inch cas 23 ft; Bowman-Hicks 8, 18-7-13, dk; Peavy-Wilso Lbr. Co. 1, 21-6-13, dk. R. L. Gay, Tr.'s Bowman-Hicks 7, 14-7-14, dr 912 ft; Bowman Hicks 8, 18-7-13, dk; Sabine Lbr. Co. 4, 13-7-1 dr 338 ft. A. H. Tarver's Long-Bell Lbr. Co 1, 18-8-13, arr ds test 3398 ft; Sabine State Bank 1, 27-8-12, topped chalk 2332 ft, set 8¼ inch cas 2333 ft, bailing 2680 ft. Olsan Bros. Hooker 1, 27-8-12, topped chalk 2357 ft, set 6⅝-inch cas 2333 ft, wosr, td 2625 ft; Leone 1, 32-8-12, set 6⅝-inch cas 2176 ft, wosr, td 2575 ft; Ferguson 1, 33-8-12, dk. Ohio Oil Co.'s Bowman-Hicks 3, 33-8-12, set 6⅝-inch cas 2400 ft, dr 2420 ft; Bowman-Hicks 4, 35- 8-12, set 6⅝-inch cas 2265 ft, arr bail, td 2372 ft. Bridges-Clark Oil Co.'s Gay 1, 3-9-12, gauged 12½ mil ft gas blowing shale, r.p. 1300 lbs, killed well, arr set liner, td 3276 ft; Cook 3-9-12, rig up. Lion O. R. Co. & D. M. Lide's Sabine Lbr. Co. 2, 31-8-12, set 6⅝-inch cas 2182 ft, wosr, td 2224 ft. W. G. Gray's Nulden 1, 6-7-12, set 6⅝-inch cas 2197 ft, dr plug. Standard Oil Co. of La.'s Nunn 1, 32-8-12, set 6⅝-inch cas 2158 ft, coring 2305 ft. Ruston Drilling Co.'s Bowman-Hicks 1, 4-7-12, set 6⅝-inch cas 2411 ft, 400 ft oil in hole, wo, td 2640 ft; Bowman-Hicks A-1, 35-8-12, set 6⅝-inch cas 2330 ft, dr 2473 ft; Bowman-Hicks A-2, 35-8-12, dk; Bowman-Hicks B-1, 24-7-14, rig up. Warner Quinlan's Sabine Lbr. Co. 2, 34-8-12, lcn. Stovall Drilling Co.'s Lefkovitz 1, 33-8-12, set 6⅝-inch cas 2328 ft, dry at 2618, at 2694 and at 2699 ft, sdow, td 2699 ft. Le Grande et al's Haley 1, 6-7-12, set 6⅝-inch cas 2130 ft, flowing sw, sd in litigation, td 2576 ft. Giaque 1, 6-7-12, lcn. D. H. Reddick, Tr.'s, Scretchfield 1, 16-9-12, tested sw 2315 ft, dr 2350 ft. H. S. Autrey's Long-Bell Lbr. Co. 1, 35-8-14, rig up, (formerly carried as W. D. Ball, owner). J. M. Bridges' McWilliams 1, 30-10-11, set 6⅝-inch cas 3116 ft. Paramount O&G Co.'s Woolums 1, 11-6-12, sp set 10-inch cas 64 ft, dr 150 ft. Zeke Lohman's Wyatt Lbr. Co. 1, 18-4-11, dk. Pelican Nat. Gas Co.'s La. Long Leaf 1, 4-7-11, dr 1070 ft; Sabine Lbr. Co. 1, 7-1-12, dr 2208 ft. Ray-Dawes Drilling Co.'s Mansfield Hdw. Lbr. Co. 1, 36-8-13, set 6⅝-inch cas 2115 ft. Ark. Fuel Oil Co.'s Nunn 1, 32-8-12, set 6⅝-inch cas 2160 ft, tested dry 2350 ft, arr deepen. Henshaw et al's Sabine A-1, 31-8-12, dr 1800 ft; Sabine A-2, 31-8-12, set 6-inch cas 2175 ft, dr in with CT 2430 ft; Sabine A-3, 31-8-12, lcn; Sabine B-1, 31-8-12, set 6⅝-inch cas 2168 ft. C. L. Jett. Tr.'s, Jones 1, 31-8-12, set 10-inch cas 100 ft, sd 805 ft. O'Brien Bros.' Colquitt 1, 31-8-12, dry at 2405 ft, arr deepen. E. C.. Simmons' Bolin 1, 31-8-12, set 6⅝-inch cas 2140 ft, rig up CT to dr in, td 2160 ft; Leach 1, 31-8-12, lcn; Anderson 1, 31-8-12, rig up. Dooley & Howard's Williams 1, 31-8-12, lcn. Airlight Oil Co. & Root Ref. Co.'s Leone 1, 32-8-12, dr 1740 ft. Broderick & Calvert's Sabine 1, 31-8-12, dk pat. G. H. Broderick's Bolin 1, 31-8-12, sp dr 1000 ft. Joe Burnham et al's Bolin 1, 31-8-12, set 6⅝-inch cas 2175 ft. David & Tyson's Neville & Roberts 1, 31-8-12, dr 1200 ft. Dixie Oil Co.'s Nunn 1, 32-8-12, set 6⅝-inch cas 2275 ft. Floyd Oil Corp.'s Barnett 1, 31-8-12, dr 1705 ft. Glassell & Merren's Thomas 1, 31-8-12, dr 1975 ft. Hebert Oil Co.'s Noble 1, 31-8-12, dk. Sabine Lbr. Co.'s Fee 1, 31-8-12, dr 1000 ft. W. S. Smith et al's Colquitt 1, 31-8-12, dk; Williams 1, 31-8-12, rig up. Henderson 1, 31-8-12, dk. F. M. Hood's Winston 1, 31-8-12, rig up. Bahan & Ryan's Meshell 1, 32-8-12, rig up. J. R. Crawford's

Pearce 1, 32-8-12, rig up. Philp Bros.' Dow 1, 31-8-12, rig up. W. F. Lacey's Knouse 1, 36-8-13, set 6⅝-inch cas 2118 ft.

TENSAS PARISH—Willis et al's Curry 1, 39-11-12e, sd 650 ft.

UNION PARISH—Fred Stovall's Stovall 1, 32-23-4e, moved rig, high water.

WEBSTER PARISH—J. J. Kean's Monzingo 1, 27-18-8e, dr 357 ft (formerly carried as F. M. Fuller's test, and former depth 600 ft.) Pat Hudson's Gardner 1, 1-22-11, dk. B. L. Slack 1, 36-23-11, set 6-inch cas 2680 ft, 4 ft sand, 1500 ft fluid in hole, 60O per cent sw, wosr, td 2741 ft (former report oil flow in error). E. W. Bateman's Womble 3, 1-22-11, set 6-inch cas 2690 ft, wosr, td 2704 ft. Magnolia Pet. Co.'s Denman 2, 1-22-11, set 8⅛-inch cas 2737 ft, pumping 30 bbls oil, td 2749 ft; Scroggins 3, 1-22-11, dk. Mount Vernon O&G Co.'s Pardee 3, 3-22-11, dr 500 ft. Phillips Pet. Co.'s Bolinger A-1, 30-23-11, wosr 3247 ft. Merritt & Merritt's Boucher 1, 17-23-11, tested 17fourbles oil and little sw through ds 2705-8 ft, dr 2800 ft. Leggett et al's Slack 1, 36-23-11, sd for water 50 ft.

WEST CARROLL PARISH — Palmer Corp.'s Marston A-1, 11-19-10e, set 5-inch cas 2592 ft, tested sw 2675 ft wo. H. L. Hunt's Brown 1, 4-21-11e, plugged back to 1000 ft, dr 1016 ft, old td 2116 ft.

MOUNTAIN STATES

UTAH

BOX ELDER—Utah-Pennsylvania Oil Co.'s Penrose 1, nw 3-10n-4w, dr 3415 ft. Lenora Mining & Milling Co.'s Swaboda 1, nw 9-8n-7w, sd 2755 ft.

CARBON—St. Thomas Oil Co., 1-14s-9e, fsh 2300 ft. Price River Pet. Co.'s Price 1, ne 16-14s-10e, dr at 3100 ft.

GRAND—Crescent Oil Synd.'s McCarthy 1, sw 27-21s-19e, dr 2200 ft. Utah Southern Oil Co.'s State 1, 26-21s-33e, dr 960 ft. Cisco Springs Synd.'s Moss 1, sw 9-20s-23e, fsh bit at 2140 ft.

KANE—Midwest Ref. Co.'s Parry 1, se 14-39s-1w, ur 2685 ft. Beaver Valley Oil Co.'s Blackrock 1, ne 20-25s-9w, fsh pipe at 3500 ft. Beaver Valley's Blackrock 2, se 19-25s-9w, sd 600 ft.

SAN JUAN—Boulder Knoll Oil Co.'s Boulder Knoll 1, nw 17-34s-25e, sd 2640 ft. Continental's Boundary Butte 1, se 22-43-22, set cas 5612 ft.

UINTAH—Home Oil Co.'s Spahr 1, sw 8-5s-21e, sd 1165 ft. Maud Ellen Oil Co.'s Neal 1, se 28-3s-21e, dr 1850 ft. Western Venture Corp.'s Krumveida 1, se 605s-21e, sd 1515 ft.

UTAH—Diamond Oil Co. 1, nw 16-8s-5e, sd 1700 ft.

IDAHO

BANNOCK—Norton Bros. et al's Marsh Valley 2, lot 5, sec. 19-10s-37e, td 2650 ft.

CLARK—Monida Oil Co.'s Beaver Dome 1, nw 32-14n-36e, sd at 1140 ft.

POWER—Gem State Pet. Co.'s Arbon Valley 1, nw 2-11s-33e, sd 3800 ft.

TETON—Grand Teton Oil Co.'s Horsehoe 1, se 33-5n-44e, sd 2140 ft. Teton Land & Leasing Co.'s Bevan 3, se 28-5n-44e, dr 1641 ft.

MONTANA

BIG HORN — Montana Production Co.'s Lynde 2, 21-6s-35e, sd 3056 ft.

CARBON—Atlantic Oil Co., 20-7s-24e, sd in Madison 1840 ft.

CARTER—Carter & Co., 1, 11-2n-58e, plug back to 2030 ft to test. Montesota Oil & Dev. Co., 1, se 7-8n-58w, set 5 3/16-in cas at 930 ft. Poss Pet. Corp., nw 7-8n-57w, sd 2505 ft.

CASCADE — Piegan et al, 36-20n-3w, fsh tools, td 2115 ft. Eden Oil Co., 1, sw 27-18n-4e, sd 1326 ft.

CUSTER—Montana Belle Oil Co., 1, ne 28-8n-45e, sd 4562 ft.

DANIEL—Whitetail Oil Synd., 1, nw 10-36n-50e, sd 1467 ft.

FERGUS—Melton Corp., sw 24-21n-17e, set string, td 2700 ft, prep to resume.

GALLATIN—California Co.'s Ringling 1, se 35-5n-7e, dr 3807 ft.

GARFIELD—Montana Corp.'s State 1, ne 36-16n-38e, reaming, td 4005 ft.

GLACIER—Kootenai O&G Co., 1, 13-35n-6w, prep to resume at 250 ft. Fulton Pet. Co.'s Hannah 1, ne 28-36n-12w, rig up. Rim Rock Oil Co.'s Brown 1, se 29-35n-5, rig up.

LIBERTY—Square Deal Oil Co.'s Federal Land Bank 1, 1-32n-7e, shutting off water at 3470 ft. Thomspson's Thompson 1, sw 7-34n-4e, sd 2314 ft. Northland Oil & Gas Co.'s Yurman 1, 35-33n-6e, sd 1030 ft. Sunburst O&R Co.'s Walford 1, ne 18-36-60, rigging.

MUSSELSHELL — Minnesota-Flatwillow's Ivanhoe Dome 1, 7-11-31, sp and sd.

PETROLEUM—Minnesota-Flatwillow, 2, sw 5-12n-25e, to dd from 1558 ft. Oregon-Flatwillow Oil Co., 1, 3-13n-26e, to resume 200 ft.

PONDERA—Hiland-Van Daele's Kendall 1, ne 35-30n-3w, sd 4215 ft. Miller Bros.' Bruins 1, nw 17-28n-1w, rig up.

ROSEBUD—Prairie O&G Co.'s N. P. 1, 9-10n-39e, sd 2310 ft. Prairie's N. P. 3, 26-10n-30e, set 6⅝-in cas at 2410 ft. Prairie's N. P. 4, 28-10n-38e, sd 65 ft.

SHERIDAN—Sheyenne O&G Co., nw 15-36n-53e, to resume at 1400 ft.

SWEETGRASS—Shoshone Consolidated's N. P. 1, nw 23-2n-15e, sd 5805 ft.

TETON—Andover Oil Co.'s Carlson 1, ne 5-24n-4w, sd 150 ft. Newman et al's Fitzgerald 1, 26-32n-1w, rig up. Rocky Mtn. O&G Co.'s Salmond 1, ne 4-23n-8w, td 1160 ft. Earl Oil Corp., 1, se 22-22n-82, sd 660 ft.

TOOLE—Monalta Oil Co.'s Buckley 1, se 1-37n-4w, dr out cemt 2352 ft. Monalta Oil Co.'s Buckley 2, sw 1-37n-4w, rg. Anaconda Pet. Co.'s Barthelote 1, ne 19-36n-2w, sd 1635 ft. Mahan et al's Lee 1, 10-31n-1w, sd 2264 ft. Roxana Drlg. Co.'s Toole 1, 22-36n-1e, sd 1700 ft. John Thomas et al's Buckley 1, ne 1-37n-4w, sd 1250 ft. Black Gold Pet. Co.'s Syrs 1, sw 30-36-28, fsh tools 1520 ft. F & F Oil Co.'s Swenson 1, se 12-33-1e, repair rig 600 ft. Mid-Continent O&R Co.'s Farbo 2, ne 2-37-4w, fsh lost bit 1900 ft.

WYOMING

BIG HORN—P & R's Gov't 3, 24-56-98, sd 4183 ft. Westland Oil, Inc., 24-54-95, sd 360 ft. Wisconsin Holdings, 4-55-97, sd 665 ft. Yellowstone Pet. Co., 7-57-97, dr 2780 ft.

CARBON—P & R, 2-19-88, sd 4562 ft. C. E. Bivens et al's Baggs 1, 35-13-92, to resume at 2200 ft.

CONVERSE—Pioneer Oil Co., 5-31-70, to resume 3300 ft.

FREEMONT—Texas Prod. Co.'s State 1, 36-34-95, waiting cemt set at 3010 ft.

HOT SPRINGS—Midwest's Weeks 8, 6-44-98, resuming at 1052 ft. Ohio Oil Co.'s Smith 1, 8-46-99, dr 3480 ft. Gebo Consolidated, 1, se 23-44-95, sd 1245 ft. C. F. Robertson et al, se 17-43-92, sd 450 ft.

JOHNSON—United Oil Co., 7-47-82, sd 360 ft. R. C. Tarrant, 4-43-82, sd 600 ft. Dome Synd., 3, 4-43-82w, sd 720 ft.

LINCOLN—Midwest's Grey's River, 25-37-117, sd 1731 ft. Midwest's Waterfall 1, 35-22-115, sd 3510 ft. Mountain Oil Corp., 36-25-115, sd 100 ft.

PARK—P & R's Pitchfork 1, 14-48-102, sd 1400 ft. Henderson Prod. Co., 31-58-99, sd 3000 ft. Ohio Oil Co.'s Burlington 1, 21-53-101, 70 bbls at 4540 ft. Resolute Oil Co., 17-27-101, resumed 4280 ft. Cody Pet. Corp.'s Danker 1, sw 22-57-98, sd 2697 ft.

SWEETWATER — Mountain Fuel Supply's Tucker 1, 18-13-99, sd 2900 ft. Mountain Fuel Supply's Cappers 1, 2-19-104, sd 3200 ft. Mountain Fuel Supply's U. P. 1, 13-19-104, sd 3100 ft. Vermillion Oil Co., 1, sw 16-12-99, dr 1800 ft.

UINTA—California Co.'s U. P. 1, 7-17n-119, dr 4633 ft.

WESTON—Gose Synd., 28-47-65, sd 400 ft.

NEW MEXICO

CHAVES—Warman Oil Trust's Blackdome 1, ne 27-13s-24e, dr 1195 ft. Cactus Dev. Co.'s Sullivan 1, se 14-10s-26e, dr 2000 ft.

DE BACA—Matador Oil Co.'s Wood 1, sw 6-4n-20e, waiting for pipe at 2730 ft.

EDDY—Van Horn et al, se 18-19s-26e, dr 1660 ft. R. D. Compton's State 1, nw 2-20s-25e, dr 1026 ft. Henderson et al's Arnold 1, se 23-17s-30e, dr 3600 ft. Henderson et al's Grier 1, nw 21-16s-31e, drilling at 1760 ft. Lockhart et al's Beeson 2, ne 28-17-30e, dr 3450 ft. Lockhart et al's Parke 3, se 15-17s-30e, lcn. Leonard & Levers' State 2, 21-17s-29e, ½ mil ft gas at 2283 ft. Pueblo Oil Co.'s Russell 5, nw 18-17s-31e, dr 380 ft.

GUADALUPE — Los Angeles - Hollywood Synd.'s McMullen 1, sw 24-5n-16e, rig.

LEA—Shell Pet. Corp.'s State 1, ne 32-18s-38e, dr 1600 ft. Shell's State 2, nw 19-18-38e, sp. Empire's State 3B, se 5-21s-35e, plugging 4695 ft. Empire's Lindley 2, se 14-25s-36e, dr 3375 ft. Continental's Sholes 2, nw 13-25s-36e, rigged and sd. Continental's Myers 1, nw 28-22s-36e, straightening, td 3595 ft. Walker et al's Terry 2, se 10-19s-38e, sp and sd. Humble O&R Co.'s Lindley 3A, sw 13-25s-36e, sp 15 ft. Bordages et al's Hughes 1, 27-19s-38e, pipe trouble 4012 ft. Morton et al's State 1, nw 32-11s-38e, dr 4400 ft. Barnsdall Corp., 1, se 28-16s-38e, plugged 5160 ft. Cranfill & Reynolds' State 1-C, sw 16-23s-36e, dr 3455 ft. Fisher & Lowrie's State 1, nw 11-18s-36e, dr 2785 ft. Texas-Pacific's State 4, 21-23s-36e, moving in. Walker et al's Terry 2, se 10-19s-38e, sp and sd. Cranfill & Reynolds' State 1-D, lot 6, sec. 3-21s-33e, dr 3140 ft. Hobbs High Oil Co.'s State 1, se 35-18s-38e, standardizing 565 ft. Ohio Oil Co.'s Northrop 1, se 32-18s-39e, dr 2550 ft. Ohio's McDonald 1, 15-29s-36e, rig. Maljamar O&G Co.'s Baish 3, nw 21-17s-32e, ready to sp. Texas Pacific C. & O.'s State 4, 21-23-36, moving in.

McKINLEY—J. W. Halsell's Santa Fe 1, 17-18s-9w, dr 3200 ft. San Juan Coal & Oil Co., 1, se 21-18n-9w, sd 2205 ft. Williams et al's Santa Fe 1, se 19-19n-8w, waiting casing at 1900 ft. Cravens et al, 7-18n-9w, dr 515 ft.

RIO ARRIBA—Berringer et al's Hartman 1, ne 8-29n-7w, preparing to resume at 825 ft. San Juan Pet. Co.'s Government 1, sw 14-30n-7w, sd 270 ft.

SAN JUAN—Dorothy Oil Co.'s Terwilliger 2, 29-30-9w, dr 1215 ft. Southern Union Gas Co.'s Day 1, sw 20-28n-10w, sd 1455 ft. Blackrock Oil Co.'s Blackrock 1, se 11-25n-13w, waiting on extension permit with td 1550 ft. Greathouse et al's Roderick 1, se 11-22s-14w, sd 1000 ft. Childers Drlg. & Pr. Co.'s Westwater 2, nw 24-31n-16w, sd 2525 ft. Reserve Oil Co.'s Shaffer 2, ne 1-21n-14w, sd 780 ft. Southern Union Gas Co.'s Kutz Canon 3, 11-27-11w, 1½ mil gas as 1973 ft. H. L. Williams' Bowman 1, ne 30-30n-15w, dr 2640 ft.

SANDOVAL—Virginia-Mex O&G Co.'s Marion 1, se 23-20n-2w, fsh at 1150 ft.

SAN MIGUEL—Pioneer O&G Co.'s Thunderbird 1, nw 14-15n-16e, dr 2285 ft. Starr Oil Co.'s Adams 1, ne 25-17n-17e, sd 2248 ft. Cibola Pet. Co.'s Crown 1, se 9-13n-14e, ready to resume 320 ft. Hershfield Dev. Co.'s Cabra Springs 1, ne 21-12n-22e, sd 730 ft. Benedict et al's Wilson 2, nw 25-17n-16e, ready to sp.

SOCORRO—Lockhart & Co.'s Stackhouse 1, 14-3s-6e, dr 2075 ft.

TORRANCE—Williams et al's Staplin 1, ne 16-8n-10e, dr 2000 ft. J. B. Witt O&G Co.'s Kutchem 1, 12-7s-7e, dr 241 ft.

VALENCIA—Rio Puerco Oil Co.'s N. M.-Ariz. Land Co. 2, ne 13-6n-2w, waiting for pipe 3145 ft. Acme Oil Co.'s N. M.-Ariz. Land Co. 1, 26-6-3, water trouble 4535 ft. Harlan et al's Harlan 1, 5-6n-2e, dr 4107 ft.

COLORADO

ADAMS—N. M. Slatt's Hill 1, se 27-35-64w, dr 1196 ft.

ARCHULETA — Outwest Investment Co.'s Fitzhugh 1, sw 34-33n-1e, ready to sp.

BENT—Continental's Pipe Springs 1, se 27-27-49, dr 5688 ft.

BOULDER—Reliance Oil Co.'s Erickson 1, nw 33-2n-70w, dr 3085 ft.

DOLORES—Transcontinental's Glade 1, nw 30-41n-16w, sd 5900 ft.

ELBERT—Belmont Oil Co.'s Maher 1, se 4-6s-59w, standardizing 3720 ft.

FREEMONT—Westerville Oil Co.'s State 1, nw 16-18-69, sd 1214 ft. Continental's Harding 2, sw 21-18-70, dr 2260 ft. Hammond & Roscio's Beltrame 1, se 1-19s-70, sd 1800 ft.

JACKSON—Midwest's Rich 21X, nw 9-6n-3381 ft. P & R's Hendershot 1, ne 2-6n-81, sd for winter 3610 ft.

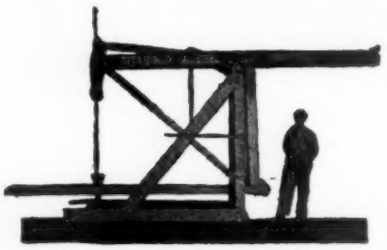
JEFFERSON—Ruby Hill O&G Co.'s Braden 1, se 24-4s-69w, ur to 3578 ft.

HUERFANO — Parker Club and Kinney-Coastal's Fee 1, se 4-28s-68w, sd 4096 ft. Elliot et al's Abeyta 1, nw 31-27s-65w, lcn.

LAS ANIMAS—Trinidad Dev. Co.'s Flontz 1, se 23-32-63, set 5 3/16-in cas at 2700 ft, water trouble. American Helium Gas & Oil Co.'s Boling 1, sw 3-29-60, lost hole at 160 ft and skidding rig.

LARIMER—Mosher et al's Reed 1, nw 28-4n-69w, bailer lost 3160 ft. Barrows et al's Barrows 1, se 7-11-68, sd 2310 ft. Continental's Scott 5, nw 6-19n-68w, 8¼-in at 3410 ft. Deininger et al's Rembey 1, ne 35-4n-70w, to resume at 354 ft. Outwest, Inc.'s Hertha 1, nw 21-4n-69w, running 8¼-in cas at 2820 ft, with 1 mil ft gas.

LA PLATA—McGarr Pet. Corp.'s Red Mesa



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1, ne 27-33n-12w, dr 725 ft. Detroit Oil Ass'n Olbert 1, se 9-35n-12w, dr 2375 ft.

LINCOLN—Kelly Oil Co.'s State 1, ne 3 14n-57w, sd 3100 ft.

MESA—Argo Oil Co.'s Hoel 1, ne 23-8 104w, recemt 8¼-in 2710 ft.

MOFFAT—McLaughlin et al's Williams 1, 2 3-92, carry 3¾-in at 4485 ft. Vermillion O&G Synd. 1, se 23-9n-100w, resuming at 842 ft Texas Prod. Co.'s Berlin 1, ne 18-12n-100w, fsh pipe 2337 ft. Texas Prod. Co.'s Knowlton 1 33-5n-91w, rig. Midwest's Hannawalt 24, 4-6n 92w, dr out cemt 2815 ft. Mountain Fuel Supply, 25-12-101, dr 2050 ft.

MONTROSE — Uncomphagre O&G Co.'s Colorado 1, nw 27-50-10, resuming at 2031 ft.

MORGAN—Ind. Ter. Ill. Oil Co.'s State 1, ne 16-1n-57w, sp.

PUEBLO—Beulah Dome Co.'s Hedland 1, sw 7-23-67w, sd 932 ft.

RIO BLANCO—Texas Production's Potter 1, se 30-2n-69w, fsh dr pipe 5894 ft. White Eagle's Fordson 1A, se 9-2s-96w, waiting parts 3028 ft.

ROUTT—Gillespie et al's Omholt 1, se 20 4n-79w, ready to sp. Ruby Hill O&G Co.'s State 2, nw 17-6n-86w, plugged at 2208 ft.

WELD—Platte Valley Pet. Corp.'s Patterson 1, se 24-6n-61w, dr 5036 ft.

WASHINGTON—Middlemist Oil Co.'s Middlemist 1, se 14-3s-56w, set 15½-in cas at 1030 ft.

YUMA—Phillips Pet.'s Andrews 1, nw 3-25 42w, fsh 5070 ft. Major Pet. Co.'s Black Wolf 1A, 7-2s-43w, sd 1535 ft.

OKLAHOMA

WOODS COUNTY—T 28n, R 16w, Sec. 23, Peerless, Crowell 1, c nw ne, dr 5145 ft.

GRANT COUNTY—T 28n, R 7w, Sec. 27, Gypsy, Bilderback 1, se c 5926 ft, hfw 5647-49 ft. T 28n, R 4w, Sec. 12, Boucher et al, Dedman 1, sw c se, hfw 3105-30 ft, dr by cas 4735 ft.

WOODS COUNTY—T 27n, R 16w, Sec. 33, Sinclair, Share 1, c ne sw, fighting cave 6790 ft.

ALFALFA COUNTY—T 27n, R 11w, Sec. 12, Smith Bros., Forbes 1, nec se nw nw, sd 1420 ft.

HARPER COUNTY—T 26n, R 24w, Sec. 14, Sinclair, Howell 1, c sw sw show oil 6711-16 ft, dr 7610 ft.

GRANT COUNTY—T 26n, R 3w, Sec. 23, Otstot Dev. Co., Tapor 1, nec se, hfw 3100-25 ft show oil 4365-4415 ft, dr 4755 ft.

KAY COUNTY—T 26n, R 2e, Sec. 32, J. A. Vincent & Nat'l Union, McNeal 1, nwc ne, sd 2795 ft.

WOODS COUNTY—T 25n, R 15w, Sec. 10, Bu Vi Bar et al, Fee 1, sec sw, sd 6104 ft.

GRANT COUNTY—T 25n, R 4w, Sec. 22, Cowden, Volmer 2, nec se ne sw, lost tools, sd 5640 ft.

ALFALFA COUNTY—T 24n, R 11w, Sec. 14, J. V. Bailey et al, Acre 1, c sw ne, water 4649 ft, r.u.s.t. 4660 ft.

GARFIELD COUNTY—T 24n, R 6w, Sec. 9, Pulse & Beamer, White 1, sec nw, hfw 4730-4800 ft, 5556 ft dr by tools. T 23n, R 4w, Sec. 32, Shell et al, Loomis 1, c nw nw, dr 4135 ft.

NOBLE COUNTY—T 22n, R 1w, Sec. 28, Gypsy et al, Berstram 1, sec nw, dr 2990 ft.

WOODWARD COUNTY—T 21n, R 19w, Sec. 19, Burgoyne Bros., Merklin 1, swc se ne, sd 1910 ft.

MAJOR COUNTY—T 20n, R 14w, Sec. 23, Keller et al, Horton 1, c ne ne, spd and sd.

GARFIELD COUNTY—T 20n, R 4w, Sec. 10, Continental et al, Brown 1, cel ne nw sw, show gas 3145-62 ft, 20M gas 5175-80 ft, td 5690 ft, running casing.

BLAINE COUNTY—T 19n, R 10w, Sec. 13, Washoma, Phillips 1, c nw sw, sd 2945 ft.

LOGAN COUNTY—T 18n, R 3w, Sec. 33, Healy et al, Quier 1, sec sw, sd 3970 ft. T 17n, R 4w, Sec. 34, Currie et al, Katcher 1, sw c ne sw, cellar.

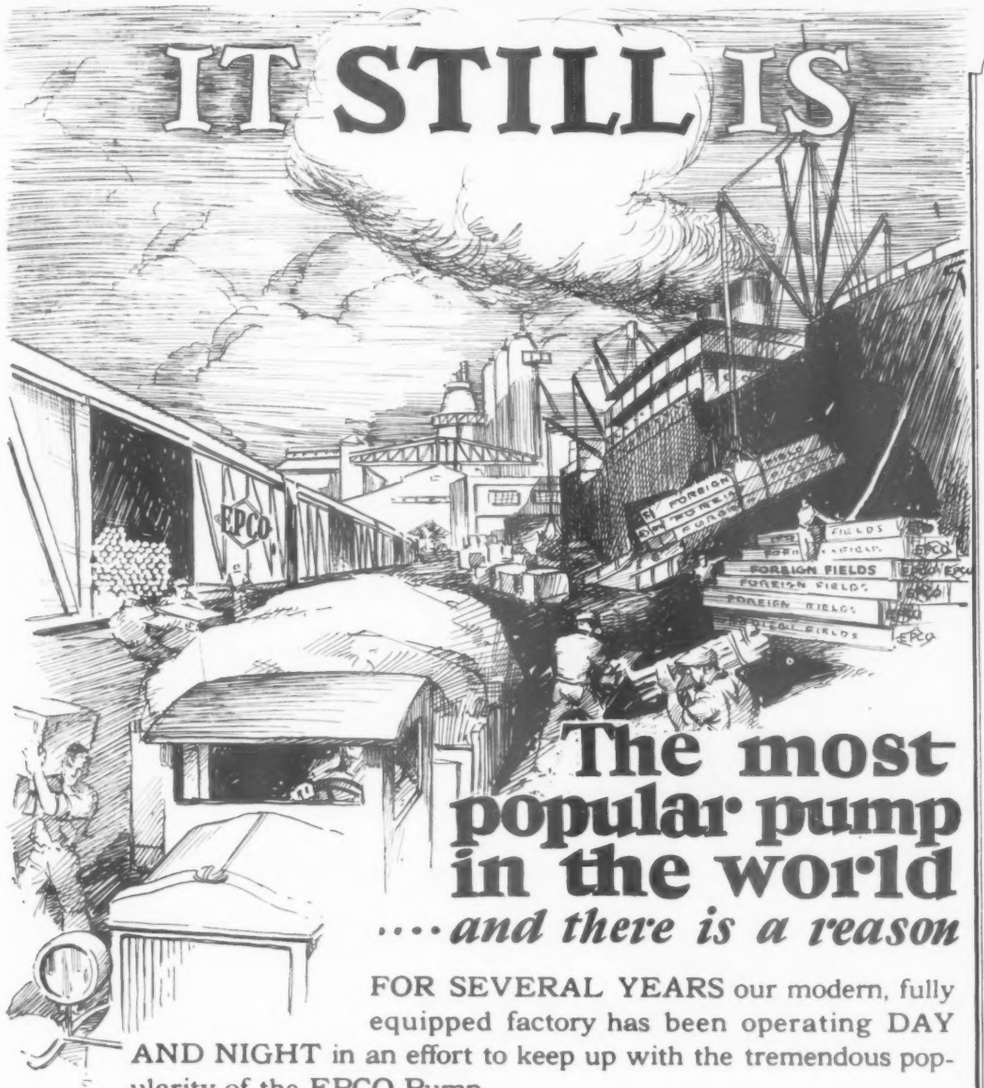
KINGFISHER COUNTY—T 16n, R 7w, Sec. 6, Gault-Brown, Boch 1, c nw se, c nw se (owdd) sd 6022 ft.

OSAGE COUNTY—T 29n, R 6e, Sec. 29, Duffield & Howard et al, 1, ne c nw, dr 2870 ft, small show oil. T 24n, R 5e, Sec. 24, Continental Oil Co., 1, ne c se se, show oil 2945-90 ft, td 3012 ft, ur 8-inch cas.

PAWNEE COUNTY—T 23n, R 5e, Sec. 15, Cochran et al, McFadden 1, ne c sw, rig. T 21n, R 7e, Sec. 32, Turner et al, Niccum 1, sec ne se, hfw 2675-95 ft, sd.

PAYNE COUNTY—T 18n, R 4e, Sec. 6,

IT STILL IS



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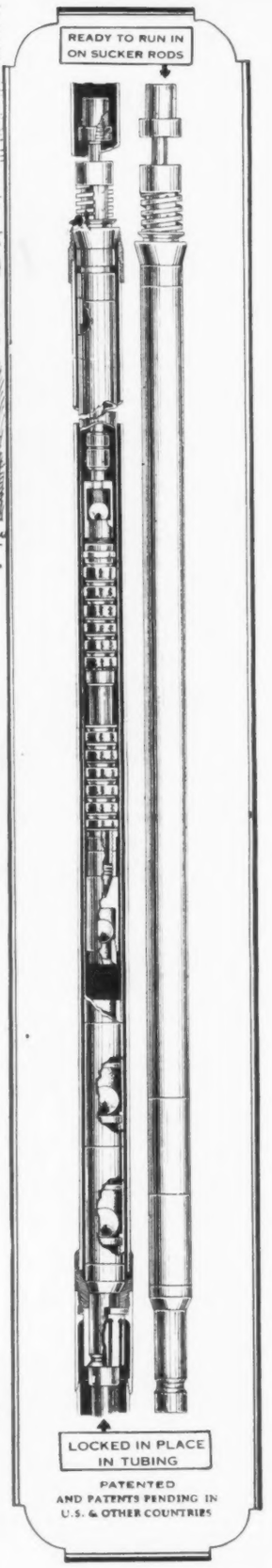

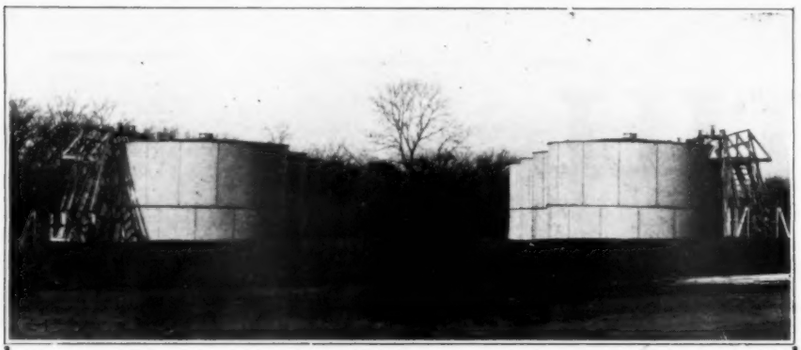

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Distributers at All Principal Petroleum Points

Sizes: 12 to 10,000 Barrels — Packed in Steel-Bound Crates for Export

MALONEY

NO CHOKING UP *with* APPLEMAN BITS

Note that water courses lead direct to cutting edge. This design has accomplished a maximum cooling effect. The cuttings are rapidly broken up and washed away in solution thus obviating choking-up.

Self-Sharpening Edges

A principle in the design is that the blades are formed concavely favoring cutting edges for both bottom and side of the hole. Attained by hard facing permitting wear on the back to retain cutting edge.

Side Wall Cutting

The cutting edge is so constructed that it cuts side wall as it drills. This feature accomplishes a full round hole and a well prepared side wall. Holds gauge longer. This side wall cutting function makes reaming rarely necessary.

Write for complete information.

B.K. APPLEMAN
BEAUMONT, TEXAS

F. M. Harrs et al, Tietz 1, sw c se, lcn, 17n, R 4e, Sec. 4, Wheeler & Mote, Funnell ne c se, ur 10-inch cas 1860 ft.

LINCOLN COUNTY—T 17n, R 5e, Sec. 1, Jilson & Kemp, School land 1, se c sw, 2092 ft, co.

OKFUSKEE COUNTY—T 13n, R 9e, Sec. 15, Erwin et al, W. Allen 1, se c sw ne, dr 1575 ft. T 12n, R 9e, Sec. 36, Henry Oil Co. Harjo 1, nw c, sd 2785 ft. T 12n, R 10e, Sec. 3, Shepperd et al, Shepperd 1, se c nw sw, 3660 ft, set 5-inch. T 10n, R 10e, Sec. 25, Transcontinental et al, Lasley 1, sw c nw, dr 700 ft.

MUSKOGEE COUNTY—T 11n, R 19e, Sec. 21, E. Mills et al, Martin 1, nw c se, 1001 ft, dry and abn.

McINTOSH COUNTY—T 10n, R 14e, Sec. 31, Jennings Bros., Crabtree 1, se c nw sw, show gas 4100 ft, sd 4650 ft, hfw.

PITTSBURGH COUNTY — T 9n, R 14e, Sec. 32, Pattison et al, McDuff 1, sw c nw se, Wilcox 5443-5511 ft, show oil 5446-70 ft, 1M gas 5464-80 ft, sand 5556-60 ft, resetting 6-inch cas 5456 ft.

HASKELL COUNTY—T 9n, R 18e, Sec. 10, Marion Oil Co., Sanders 1, nw c ne sw, sd 2692 ft.

LATIMER COUNTY—T 6n, R 22e, Sec. 23, Limestone O&G Co., Shaw 1, nw c ne nw, dr 2625 ft.

OKLAHOMA COUNTY—T 13n, R 1w, Sec. 13, Tom Slick, Martin 1, c nw nw, td 6964 ft, water, pb. T 13n, R 3w, Sec. 35, Magnolia et al, Johnson 1, ne ne sw, dr 5140 ft. T 11n, R 2w, Sec. 3, Ryan Consolidated, Lawton 1, ne nw, dr 5254 ft.

POTTAWATOMIE COUNTY—T 6n, R 3e, Sec. 22, Payne Drlg. Co., Bullock 1, se c ne, td 4201 ft, set 3-inch. T 6n, R 3e, Sec. 36, Sykes et al, Cook 1, sw nw ne, rig.

CLEVELAND COUNTY—T 6n, R 1e, Sec. 20, Brownfield, Corbett 1, c sw ne, dr 4720 ft.

HUGHES COUNTY—T 9n, R 12e, Sec. 29, Canady, Canard 1, sw e nw nw, 1M gas 2815 ft, sd.

SEMINOLE COUNTY—T 6n, R 6e, Sec. 6, Superior, Morgan 1, se c, sand 2760-66 ft, td 2950 ft, swb 22 bbls.

ROGER MILLS COUNTY—T 12n, R 24w, Sec. 23, Bucy & Stone, Williams 1, c sw, dr 2214 ft. T 11n, R 26w, Sec. 4, L. C. Hivick, Davis 1, c nw se, sd 2840 ft.

CANADIAN COUNTY—T 10n, R 6w, Sec. 1, J. V. Bailey, Robinson 1, c ne nw, sd 150 ft.

BECKHAM COUNTY—T 8n, R 22w, Sec. 20, Carson et al, Denby 1, sw c se ne, sd 1700 ft.

GREER COUNTY—T 6n, R 24w, Sec. 17, I. T. I. O. et al, Fee 1, c ne, dr 2173 ft.

COMANCHE COUNTY—T 3n, R 9w, Sec. 3, Okla. Nat. Gas Co., Doebel 1, ne c sw sw sw, dr 1350 ft.

STEPHENS COUNTY—T 2n, R 8w, Sec. 30, Smythe & Nash, Johnson 1, ne c, small show oil 2480-83 ft, bailing.

COTTON COUNTY—T 2s, R 9w, Sec. 8, Thomas Medlin, Johns 1, sw c se, 2526 ft.

STEPHENS COUNTY—T 3s, R 9w(Sec. 22, Pelwin et al, King 1, sw c se (owdd) 3180 ft, abn.

STEPHENS COUNTY—T 3s, R 9w, Sec. 11, H. W. Lee, Hotubbi 1, se c nw (owdd) 2513 ft, abn.

HUGHES COUNTY—T 5n, R 10e, Sec. 30, Erwin et al, Jones 1, se c ne, sd 1300 ft. T 5n, R 11e, Sec. 15, J. J. Wright, Roberts 1, se c sw, rig.

GARVIN COUNTY—T 4n, R 1e, Sec. 11, W. H. Peckham et al, Mullins 1, c w2 w2, sd 4207 ft. T 4n, R 3e, Sec. 10, C. R. Obermeyer, Stricklin 1, ne c sw, dr 1340 ft.

ATOKA COUNTY—T 3s, R 10e, Sec. 18, Brookshire et al, Guinn 1, nwc nw, sd 80 ft.

CARTER COUNTY—T 4s, R 2e, Sec. 32, Tex-Okla. Drlg. Co., Anderson 1, se c ne se, fsh 2200 ft.

MARSHALL COUNTY—T 5s, R 5e, Sec. 17, Jordan et al, Penn Mut. Life Ins. 1, nw c ne se, sd 700 ft.

BRYAN COUNTY—T 9s, R 9e, Sec. 36, W. C. Endicott et al, Craig 1, c nw ne, sd 2200 ft.

WOODWARD COUNTY—T 23n, R 17w, Sec. 23, Prairie O&G et al, Wilbur 1, ne c, dr 6227 ft.

CLEVELAND COUNTY—T 10n, R 2w, Sec. 8, Prairie, Slick & Phillips, Sudik 1, c ne ne, 7720 ft, fsh 4-inch cas at 5450 ft.

One and one-half ton truck hauling nine uniform 40 foot lengths of 16" Naylor Pipe

Saving $392.83

Per Mile in Trucking, Unloading and Stringing ...Because of one Naylor Pipe advantage

TRUCKING, unloading and stringing a 12" Naylor Pipe line cost one oil company only $114.05 per mile.

Compared with their cost figures on another 12" line of standard weight pipe, random 18 to 22 foot lengths, laid under similar conditions---the saving was $392.83 per mile.

Naylor Pipe is the lightest weight pressure pipe. It weighs only half as much as standard weight wrought pipe.

Because of this light weight, trucks hauling Naylor Pipe can carry double the load...fewer trips are needed. Unloading is simplified---as well as stringing, because the light weight makes handling easier, faster and requires only half as many men on the job.

But trucking, unloading and stringing wasn't the only economy on this 12" Naylor Line. The complete comparison of the cost figures on the two lines---including all costs from freight to "as laid in the ground"---showed a net saving of $2,064.74 per mile on Naylor Pipe.

For the greatest economy, lay all your lines with Naylor Pipe.

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Maximum Structural Strength Mo-lyb-den-um With Minimum Weight

IRON

Standardized Naylor Pipe is made in sizes 6" to 12" I. D. and 14" to 20" O. D. in any uniform length desired up to 40' 0". Ends made to wrought pipe standards for all types of coupling.

Where corrosion is not a problem, Naylor Pipe can be furnished in steel.

Toncan Copper Molybdenum Iron is a development of Central Alloy Steel Corporation, the world's largest and most highly specialized alloy steel producers. It possesses a superior corrosion resistance, making it the favored pipe material.

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Pomona Pumps

Behind every Pomona Pump is more than 25 years of specialization in the development and construction of water pumps . . . Built of the finest materials and designed by capable and efficient engineers Pomona Pumps may be depended upon to give years of extra service.

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GOTT Water Cans 1½ gal; 3 gal; 5 gal; and 10 gal.
GOTT Water Coolers 3 gal; 5 gal; 8 gal; 10 gal; and 20 gal.

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SURVEYS
ESTIMATES OF OIL RESERVES

AN EXPERIENCED OIL FIELD ORGANIZATION

KANSAS

SUMNER COUNTY—Davidson et al, Strickland 1, sw se, 12-35-1w, rig.

STEVENS COUNTY—Argus Oil Co., Armstrong 1, cnl, s½ n2, 16-34-39w, dr 1727 ft. W. Sidwell et al, Kelly 1, sw ne 16-34-38w, dr 1600 ft. Argus Oil Co., Parker 1, c ne 30-34-38w, dr 2000 ft.

BARBER COUNTY—Skelly, Temple Ranch 1, sw ne, 13-34-15w, top Viola 5241 ft, td 5241 ft, show oil, cmtg 5-inch cas.

SUMNER COUNTY — Morgan and Carr, Hawkins 1, sw se, 9-34-1e, dr 3902 ft.

STEVENS COUNTY—McNabb et al, Ramey 1, c sw, 11-33-38w, dr 2000 ft. Argus Oil Co., Smith 1, c sw 13-33-37w, dr 2400 ft.

CHAUTAUQUA COUNTY—Valentine, Patterson 1, nw se sw 2-33-9e, dr 1400 ft.

SEWARD COUNTY—Mangle, Younger 1, c se nw 24-32-39w, spd and sd. Argus Gas Co., Hobble 1, c se 17-32-37w, fsh tools 2625 ft.

BARBER COUNTY—Phillips & Robertson, Powell 1, c se se, 11-32-10w, fsh tools 4023 ft.

COWLEY COUNTY—Prairie, Desbaugh 1, Sec. 10t 27, 18-32-8e, dr 1775 ft. Roth & Farrot, Adams 1, c sw ne ne 19-32-8e, ru.

HARPER COUNTY—Beeler et al, Bear 1, c ne 21-31-6w, sd 1830 ft.

COWLEY COUNTY—Milton & Mead Bros., Tatum 1, se sw, 11-31-6e, dr 2916 ft.

SUMNER COUNTY—Hatfield et al, Dauber 1, nec, 18-30-1w, spd and sd.

ELK COUNTY—H. F. Fleming, Sherod 1, nw c 16-29-9e, td 2657-60 ft, sub 100 bbls oil and 100 bbls water.

SEDGWICK COUNTY—McCulloch, Buckles 1, nw se 3-28-1w, sd 1155 ft.

FORD COUNTY—McNabb et al, Fowler 1, c se 26-27-22w, sd 400 ft.

BUTLER COUNTY—Martin et al, Flanigan 1, c sw se sw 29-27-3e, ur 6-inch cas 2820 ft.

GREENWOOD COUNTY — Mallory et al, Denchfield 1, se nw 12-27-9e, dr 660 ft. F. Konday et al, Rook 1, nw ne ne 7-27-12e, dr 1200 ft.

PRATT COUNTY — Skelly, Johnson 1, ne sw 21-26-17w, td 4545 ft, co. Wilcox, Unknown 1, sw nw 7-26-15w, td 2785 ft, fsh bit. O'Haver & Jones, Gareke 1, c ne sw 7-26-14w, td 4295 ft, co.

RENO COUNTY—Wilson et al, McPheeters 1, c s½ nw, 22-26-8w, td 4076 ft, sd. Valerius, Stevens 1, c ne se ne, 6-26-7w, dr 1160 ft.

SEDGWICK COUNTY — Travender et al, McLena 1, se sw se, 23-26-1w, sd 975 ft. Johnson, Petrie 1, sw se 35-26-1w, ru.

BUTLER COUNTY—Liggett, Guanther 1, c se ne nw 29-26-7e, spd and sd.

HODGEMAN COUNTY—Swain et al, Kenthorne 1, c nw 21-25-24w, dr 1475 ft.

EDWARDS COUNTY — Dixie-Amerada, McCarty 1, sw 22-25-17w, dr 4342 ft. Barnsdall, McCarty 1, nw ne 31-25-17w, sd 4290 ft.

GREENWOOD COUNTY—John Harwood, Good 1, c sw nw ne 36-25-9e, spd.

WOODS COUNTY—Bundy-Smith & O'Neil, Ford 1, ne nw 28-25-13e, spd and sd.

RENO COUNTY—Skelly, Birkett 1, ne sw 3-24-7w, Wilcox 4172-4210 ft, hfw td 4247 ft, sd, pb 2191 ft and sd.

STAFFORD COUNTY—Gibson et al, Mueller 1, c sw 11-23-14w, dr 3815 ft.

HARVEY COUNTY—Liggetts, Regier 1, c se nw se 2-23-3w, hfw 3855 ft, dry and abn. Margaret Gay Oil Co., Grouse 1, nw ne nw 29-23-1w, sd 3360 ft.

WOODSON COUNTY—Derby & Spencer, Kinyon 1, cnl se nw 29-23-15e, ru.

HODGEMAN COUNTY — Phillips, Housman 1, c ne 30-22-22w, td 5034 ft, rog 5-inch cas.

RENO COUNTY—Witt et al, Olsen 1, se nw 14-22-6w, hfw 3575 ft, dr 3795 ft. Burgher, Fair 1, c se ne ne 14-21-10w, dr 3230 ft, hfw 3165-88 ft.

McPHERSON COUNTY—McCulloch, Cornelius 1, sw c, 7-21-4w, hfw 4002-05 ft, dry and abn. Harry Skelly et al, Newfeldt 1, se ne 19-21-3w, rig.

LYONS COUNTY—Sheedy et al, Ewers 1, c ne se nw 4-21-10e, dr 2340 ft.

LINN COUNTY—Ferguson & Hiatt, Carple 1, ne se sw 22-21-22e, rig.

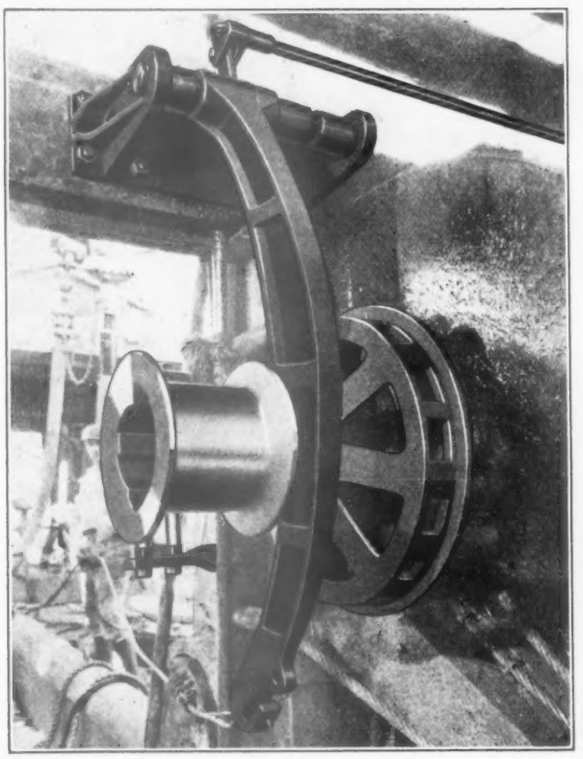
RUSH COUNTY—Prairie, Black 1, sw ne, 11-20-18w, dr 2965 ft.

RICE COUNTY—McCulloch, Williams 1, c ne 35-20-8w, sd 1438 ft. Derby, Johnson 1, c nw ne se 24-20-6w, hfw 3652-58 ft, sd.

McPHERSON COUNTY—Millmack, Decker 1, nwc 11-20-3w, dr 1560 ft.

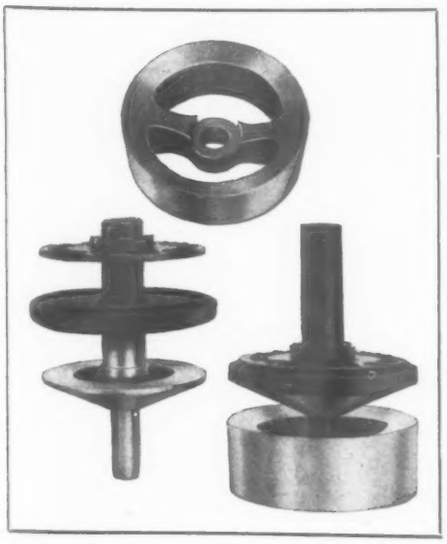
CHASE COUNTY—Steinbushel et al, Ste-

Saves rope ...paying for itself in the first 4000 feet of hole



YOU can come out of the hole faster, breaking joint after joint with remarkable speed when using the MacClatchie Automatic Safety Cathead . . . and there are no stops to replace worn or broken rope. The breaking line is a stout steel cable, lasting many times as long as ordinary rope. One pull of the driller's lever breaks the tightest of joints. At no time is it necessary to approach the cathead while it is in action . . . which accounts for the high safety factor of the device.

It has no clutch, bearings or bushings to wear; all parts are accessible; and the upkeep is negligible. Well known in all the fields of the world, it saves time . . . money . . . and it's safer than any other breaking device. The famous MacClatchie Mud Pump Valve is shown below. There are more MacClatchie Valves used than any other make. *Quality is responsible!* They are stocked by all Mid-Continent Continental Supply stores. Mail the coupon below for further data on these and other MacClatchie Quality Products.



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MacClatchie "Panther" Aircraft Engines

☐ Send me a general catalog.

Name ..... Position .....

Company ..... Address .....

phenson 1, ne sw 4-20-6e, fsh 1435 ft. Transcontinental & Cheney, Wassell 1, ne se 36-20-9e, dr 1020 ft.

LYON COUNTY—Alladin & Phillips, Ratcliff 1, swc 29-20-10e, rog.

RUSH COUNTY—Danciger, Bell 1, c sw 16-19-8w, hfw, 3492 ft, dr ahead.

MARION COUNTY—Marshall et al, Higgens 1, ne c 33-19-5e, rig.

CHASE COUNTY—Steinbushel et al, Cook 1, sec 195 27, 31-19-8e, dr 1690 ft.

RUSH COUNTY—Millmack, Mohr 1, c nw 11-18-16w, 24M gas, 3507-08 ft.

RICE COUNTY—Tatlock et al, Ploog 1, c sw se 33-18-9w, rig. Urschell et al, Lipps 1, c sw sw 27-18-6e, setg 6-inch cas 1770 ft.

CHASE COUNTY—E. W. Marland, Altenmus 1, se nw 33-18-8e, dr 2790 ft.

ELLSWORTH COUNTY — Tatlock et al, Sacken 1, c sw se 25-17-9w, hfw 3283-88 ft, ur 8-inch cas.

McPHERSON COUNTY—Dixie, Johnson 1, swc 20-17-3w, hfw 3539-53 ft, td 3554 ft, ur 5-inch cas. Galt-Brown et al, Zeitlow 1, c ne se se, 7-17-1w, dr 2523 ft, co.

NESS COUNTY—Clark et al, Vaughn 1, se sw 28-17-22w, spd.

BARTON COUNTY — Prairie, Davidson 1, nw se 4-16-11w, dr 3240 ft.

DICKINSON COUNTY—Prairie and Phillips, Rumold 1, c nw sw ne 12-16-2e, sd 3200 ft. Hiatt & Durham, Went 1, nw c 17-16-2e, spd.

MORRIS COUNTY—Urschell et al, Scott 1, ne sw 6-16-6e, dr 2115 ft.

ELLIS COUNTY—Rush Oil Co., Gatewood 1, nw 4-15-20w, sd 2765 ft, cas trble.

DICKINSON COUNTY—Cress et al, Sandon 1, nec 12-15-2e, ru and sd.

TREGO COUNTY — Dixie-Amerada, Reitmeyer 1, c ne ne 19-14-21w, dr 3725 ft.

DOUGLAS COUNTY — Steinbushel et al, Unknown 1, sw ne nw, 34-14-21e, show oil 766-90 ft.

ELLIS COUNTY—Streeter & Stearns, Laiker 1, sw ne 26-13-20w, sd 1294 ft.

DICKINSON COUNTY — Emery-Curtis & Bryan, Hevner 1, c nw se 31-13-3e, dr 910 ft.

TREGO COUNTY—Day, Guyler 1, c sw ne ne 36-12-31w, sd and spd.

ELLIS COUNTY — Central Commercial, Helms 1, se ne 2-12-20w, spd.

TREGO COUNTY—E. H. Morgan, Whithair 1, nw se 9-12-13, sd 1768 ft.

SHAWNEE COUNTY — Jenkins & Scott, Haden 1, ne se 8-12-14e, dr 1040 ft. Jenkins & Scott, Haden 1, se nw 10-12-17e, sd 550 ft.

LEAVENWORTH COUNTY—Forrester et al, Yazel 1, cel se se 18-12-22e, setg 6-inch cas 1215 ft.

ELLIS COUNTY—Byrens et al, Fisher 1, nw se 4-11-20w, sd 1000 ft.

RUSSELL COUNTY—Gilbreath et al, Bratton 1, c ne 33-11-13w, sd 1010 ft.

SHAWNEE COUNTY—Forrester, Hummel 1, nec 14-11-16e, dr 2200 ft. Jenkins & Scott, Unknown 1, nw ne 28-10-15e, sd 985 ft.

ROOKS COUNTY—Krueger, Steis 1, nw se sw, 12-9-16w, sd 570 ft.

CLAY COUNTY—Chrisler, Tivler 1, se 19-8-3e, spd and sd.

GRAHAM COUNTY—Madolin, Unknown 1, c se sw sw, 27-7-26w, spd and sd.

RILEY COUNTY — Derby-Skow Bros., Lundstrum 1, ne 32-7-5e, sd 2270 ft. Gray et al, Smith 1, ne se 30-6-6e, sd 1970 ft.

NORTON COUNTY—A. L. Richards, Colby 1, c sw 17-4-21w, rig.

MARSHALL COUNTY—Swicker & Simcox, Remple 1, c n½ nw 22-4-9e, dr 1000 ft. Blazier et al, Runkel 1, se nw 13-2-6e, mch.

ARKANSAS

Company, Well and Location	Initial Production Bbls.	Depth
POPE COUNTY—		
Ark. La. Pipe Line Co., Crutchfield 1, 14-9-21		1705

COLUMBIA COUNTY — L. E. Parker's Franks 1, 25-19-22, sd 2831 ft.

CLEVELAND COUNTY—Donnell et al's Fee 1, 33-11-9w, dr hard rock 145 ft (correct.)

CLEBURNE COUNTY—Cosden Oil Co.'s Donithan Lbr. Co. 1, 19-9-10, set 10-in cas 2485 ft, dr shale 2495 ft.

DREW COUNTY—McClintock & Goedke's Ogle 1, 33-13-3, dr 2400 ft in new hole, td old hole 2530 ft.

FAULKNER COUNTY—Gold Creek O&G Co.'s Stermer 1, 17-4-13, ta 3872 ft. Stermer 2, 17-4-13, rigged up ready to sp, dr water well.

FRANKLIN COUNTY — Ozark Nat. Gas Corp.'s McElroy 1, 15-8-27, arr plug back, td 3100 ft.

GARLAND COUNTY—H. H. Given's Garrett 1, 1-13-19w, dr 3415 ft.

GRANT COUNTY—Jones & Watkins' Meek 1, 5-4-11, ta 1400 ft.

JOHNSON COUNTY—Ark. La. Pipe Line Co.'s Patterson 1, 14-10-14, ur after setting 8-in cas 2900 ft. Blackwell O&G Co.'s Wyver 1, 21-8-25, jarring out 6-in cas at 2100 ft, test gas sand at 1900 ft, td 5600 ft.

LOGAN COUNTY—M. W. Greesop's Perk 1, 21-8-24, sd 1309 ft.

LAWRENCE COUNTY — Marguerite Dev. Co.'s Broadway 1, 31-17-1, sd 45 ft.

LITTLE RIVER COUNTY—Grote et al's Allen 1, 31-12-31, ta 2941 ft. C. F. McDonald's Black 1, 12-13-28, tests sw 2016 ft, coring 2017 ft. Buck Oil Co.'s Taafe 1, 23-12-32, sd 2330 ft.

MADISON COUNTY—Phillips et al's Skinner 1, 11-14-28, arr resume dr 1461 ft.

NEVADA COUNTY—Roy Davis et al's Henry et al, 1, 10-12-20, rigged up wo.

OUACHITA COUNTY — Anderson et al's Buck 1, 7-15-17, arr resume fsh for ds, td 2727 ft (formerly reported junked and abn). Artex Oil Co.'s Smith 1, 31-15-17, ta 3188 ft. McDonald Bros.' Wilson 2, 25-15-18, coring sandy lime 2822 ft. Magnolia Pet. Co.'s Grayson 2, 21-15-19, set 8⅝-in cas 1478 ft, 250 ft oil in hole, wosr, td 1480 ft.

PIKE COUNTY—Theo. Davis, Tr.'s Ruth Wilson 1, 25-5s-26w, sd 718 ft.

POPE COUNTY—Cosden Oil Co.'s Mo. Pac. R. R. 1, 13-9-19w, set 10-in cas 2508 ft, fsh for bit, td 3410 ft. Ark. La. Pipe Line Co.'s Crutchfield 1, 14-9-21, dry abn, td 1705 ft.

SCOTT COUNTY—Mansfield Gas Co.'s Norris 1, 6-4n-30w, set 10-in cas 1447 ft, dr soft shale 2405 ft.

SEBASTIAN COUNTY—M. W. Greesom's Spears 1, 9-7-29w, lcn. Lavaca O&G Co.'s

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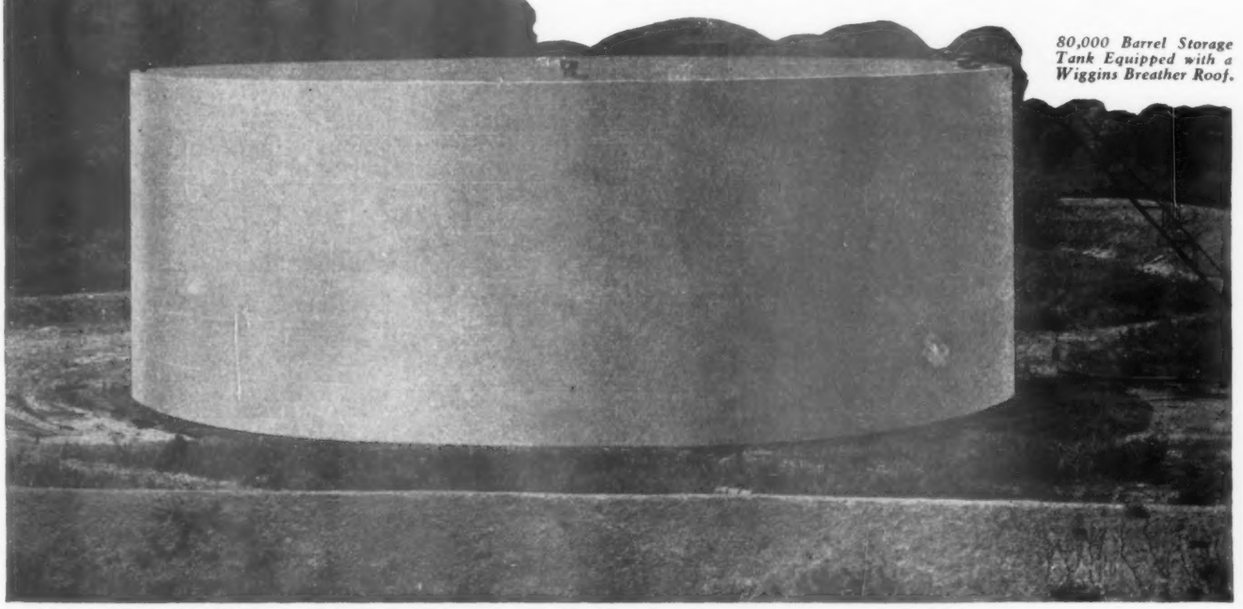

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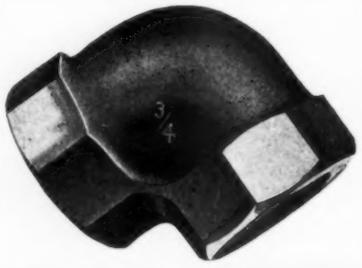
Cason 3, 21-8-30, dk. J. O. Ingram 7, 22-8-30, dr 2700 ft, no recent report. A. G. Williams, Jr.'s Patterson 1, 27-8-30, lcn. Lavaca O&G Co.'s Bradley 7, 28-8-30, rig up.

ST. FRANCIS COUNTY — Brownlee Oil Co.'s Whitted 1, 28-4-1, sd 400 ft.

UNION COUNTY—Lion O. R. Co.'s McDuffie 1, 32-19-16, ta 4506 ft. Johnson Drilling Co.'s Tate 1, 14-18-14, set 6⅝-in cas 2204 ft, 10 ft sand bailed dry, 200 ft fluid rose in hole in 12 hours, pulled liner, co, td 2226 ft. H. L. Hunt's Pratt 6, 7-18-15, sand pumping 2214 ft. Al-Cal Oil Co.'s Haney 1, 1-18-16, sd, wo 2770 ft. Malley & Co.'s Robertson 3, 6-18-15, lcn. Goodwin 4, 36-17-16, set 6⅝-in cas 2186 ft, dr in. Murphy 1, 1-18-16, rig up. Wisinger & Ball's Rodgers 1, 31-17-15, cementing off split joint 300 ft down after setting 6⅝-in cas 2170 ft. Lion O. R. Co.'s Ballard 1, 10-18-13, tested 12 fourbles sw 3576-78 ft in 6 minutes through ds, tested 7 fourbles sw, show gas 3600-08 ft through ds, tested 17 joints sw through ds 3631-41 ft, coring hard red beds 4670 ft. Johnson & Gummer's Cargile 1, 4-18-13, coring red beds 3720 ft. Federal Pet. Co.'s Tillman 1, 9-18-13, lcn. Marine Oil Co.'s Winn Est. B-2, 10-18-13, dr red beds 3425 ft. Simms Oil Co.'s Simmons A-1, 10-18-13, tested 5 joints mud, water and oil with good gas show through ds 3470-3500 ft, tested 11 joints oil, no water, in 10 minutes 3528 ft, cored 1 ft oil sand 2 ft sandy lime 3528-31 ft, setting 3½-in cas 3520-31 ft (formerly carried M. H. Simmons 1). Simmons B-1, 10-18-13, dr 170 ft (formerly G. C. Simmons 1). Simmons A-2, 10-18-13, lcn (formerly M. H. Simmons 2). E. L. Chapman's School District 1, 9-18-13, lcn. H. L. Hunt's Norris 1, 17-18-12, rig up to deepen, td 3406 ft. Modisette Drilling Co.'s Union Sawmill 3, 14-18-14, dr 2130 ft. Root Ref. Co.'s Jerry 2, 21-17-14, lcn.

WASHINGTON COUNTY—Lincoln Lease Holding Co.'s Townsite 1, 30-15-32, sd 1500 ft. C. H. Willoughby's Jones 1, 34-16-30, trying kill water flow 2150 ft. O'Hara & Shetterley's Boyd 1, 12-16-32, ta 850 ft. Delbert Graves' Cunningham 1, 14-15-32, sd in gray sand 602 ft.

WHITE COUNTY—Letona Synd.'s Letona 1, 35-9-8, set 5 3/16-in cas 3500 ft, sd 3650 ft.



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HOUSTON, TEXAS

VAN BUREN COUNTY — J. S. Martin's Scanland 1, 5-9-13, sd 50 ft.

YELL COUNTY—T. Luckett's Balcon 1, 36-7n-21w, arr resume dr 3550 ft.

MISSISSIPPI

ALCORN COUNTY — Alcorn Pet. Co.'s Matthews 1, 14-2-7, fsh for 12 joints 6-inch cas lost trying re-run at 2418 ft, td 2735 ft.

CHICKASAW COUNTY — Hightower & Golsan's Fleming 1, 20-13-3w, driving 8¼-inch below 1325 ft; Fleming 2, 15-13-2w, dk pat.

CLAIBORNE COUNTY—Ben White's Old Hen 1, 26-10-4, sd 2004 ft.

HARRISON COUNTY (Gulfport Dist.)—Dalton Oil Co.'s Lopez 1, 15-7-10w, lcn.

HINDS COUNTY (Jackson Dist.) — Mrs. Ella Rawls Reeder's State Land 1, 25-6-1e, fsh for parted ds, td 2905 ft. Jackson O&G Co.'s Mayes 1, 2-5-1e, sd wo 2585 ft; Taylor 1, 35-6-1e, set 15¼-inch cas 61 ft, set 10-inch cas in gumbo 797 ft. Louisiana G&F Co.'s Harris 1, 35-6-1e, set 15¼-inch cas (correct) 93 ft, coring 200 ft. Love O&G Co.'s Bridges & Hilzim 1, 35-6-1e, dk (formerly carried as Lot 1,) Love Pet. Co.'s Mendoza 1, 11-5-1e, rig up. Progressive O&G Co.'s Mayes 1, 2-5-1e, dk pat. Tri-State O&G Co.'s E. S. Wilson 1, 23-6-1e, dk.

KEMPER COUNTY (De Kalb Dist.)—W. W. Jones' Fee 1, lcn not given, dk.

LA FAYETTE COUNTY—F. E. West et al's May 1, 22-10-1w, rigged up wo.

LAUDERDALE COUNTY (Meridian Dist.)—Lauderdale O&G Co.'s Lackey 1, 2-7-16, set 8¼-inch cas 2790 ft, wo 2816 ft. Meridian Nat. Gas Co.'s Mattie Houser 1, 33-8-18, sd in sandy shale, td 2826 ft. Boyd Hammond's Craig 1, 2-6-14, dk.

LINCOLN COUNTY (Brookhaven Dist.)—Lincoln O&G Co.'s Pat Case 1, 21-8-6, arr abn, td 2221 ft.

LEE COUNTY — Lee County Pet. Co.'s Hickman 1, 12-8-6, sd 920 ft.

MONROE COUNTY (Amory Dist.)—Amory Pet. Co.'s Hall 1, 8-13-17, set 8-inch cas 2293 ft, set 6-inch cas 2333 ft, dr slate 2432 ft, well showing water, td old hole 3045 ft. Amory Dev. Co.'s Bourland 1, 2-13-19, sd in lime bailer in hole, td 2912 ft. Park Bowser's Cowart 1, 2-12-19, wo with pipe driven to 85 ft.

RANKIN COUNTY (Jackson Dist.)—Gulf Ref. Co.'s Rainey 1, 13-5-1e, set 15¼-inch cas 88 ft., set 12¼-inch cas 960 ft, sr to set 9-inch cas 2500 ft after testing sw and oil through ds 2510-15 ft. R. A. Moore et al's Interior Lbr. Co. 1, 28-6-2e, dk.

WARREN COUNTY (Vicksburg Dist.)—Henderson et al's Dornbusch 1, 8-18-15, sd wo with ds stuck in hole, td 2475 ft.

WEBSTER COUNTY — Cumberland Oil Co.'s Henley 1, 15-21-11, re-taking leases but still shut down, td 1865 ft.

YALABOUSHA COUNTY (Water Valley Dist.)—J. D. Collette et al's Blackmer 1, 14-11-4w, topped red beds 2316 ft, sr, td 2433 ft.

YAZOO COUNTY — Amerada Pet. Corp.'s Campbell 1, 24-21-2, topped Cretaceous chalk 3600 ft, topped basal Midway 4910 ft, sd repr rig in sandy lime, td 5200 ft.

ALABAMA

HOUSTON COUNTY—J. R. Sealey's Fee 1, 13-1n-27e, changing from cable tools to rotary, td 3100 ft.

LAMAR COUNTY—Briggs & Knapp's Wefel 1, 25-12-14, set 4⅞-inch cas 1658 ft, sd 1740 ft.

LAUDERDALE COUNTY — P. J. McAlpine's O'Neal Hrs. 1, 8-2s-13w, dr below 250 ft.

MARION COUNTY — P. J. McAlpine's Clark 1, 22-11-14, dk pat.

MORGAN COUNTY—Albany-Decatur O&G Co.'s English 1, 6-6-4, fsh for cas, td 4130 ft.

SUMTER COUNTY—B. W. Bates' Fee 1, 3-18-1w, ta 1200 ft; Fee 2, 3-18-1w, rig up.

WASHINGTON COUNTY—Hobson et al's Wilson 1, 27-7-1w, arr resume dr in limey shale 881 ft; Hobson Bros. 1, 9-8-2w, sd 1450 ft. Oscar Brown's U. S. Land & Cotton 2, 25-3-2, dr below 720 ft.

TENNESSEE

DECATUR COUNTY—Chester County O&G Co.'s Montgomery 1, set 6-inch cas 1045 ft, dr 1731 ft.

SOUTHERN CALIFORNIA

BANDINI—George F. Getty's Kellam 1, dr shale 4770 ft. Harry Sanky's Vail 1, lcn.

CALABASAS — J. W. Martin's No. 1, shale 1268 ft.

COMPTON—California Well Drilling Co.'s Del Amo 1, sd 8500 ft.

GARDENA—Ohio Oil Co.'s Fish 1, dr 92[illegible]

HERMOSA — California-Ventura Oil Co.'s Smith 1, dr shale streaks oil sand 5420 ft.

LA HABRA—R. C. Rucker's Grazide 1, shale 3665 ft. Union's Sansinena 11, dr 264[illegible]

NEWHALL—Pico Dome Oil Co.'s No. 1, sdtr iron 660 ft. Southern California Drilling Co.'s Needham 3, bldg rig. Yorke and Lockhart's Clampitt 2, rig.

POMONA—Grimes-Girrard's No. 1, dr [illegible] ft.

PUENTE—Western Gulf's Diamond Bar 1, dr shale 3800 ft.

RICHFIELD—Weber and O'Brien's Brown 1, 4¾-inch cas cmt 5350 ft.

SAN FERNANDO—Shell's Andrews 1-1, dr hard sand 575 ft.

SAN JOSE HILLS—Richfield's Benadett 1, lcn.

SOUTH LOS ANGELES—William Dillen No. 1, dr shale 5220 ft.

TELEGRAPH CANYON—Union's Rimpau 1, dr hard rock 3670 ft.

RIVERSIDE COUNTY—Hemet Pet. Co.'s Ward 1, dr shale 3570 ft. Trabuca Oil Co.'s No. 1, dr hard sand 4350 ft.

NORTHERN CALIFORNIA

Completions

Company, Well and Location		Initial Production Bbls.	Depth
EDISON—			
Texas' Newman 1, 23-29-28	*	6287	
MIDWAY—			
Texas' Gore 4, 21-31-22	*	4380	
SAN ARDO—			
Shell's Dudley 1, 15-22-9	*	5465	

KERN COUNTY

BELRIDGE—J. H. Kennedy's No. 1, 5-29-21, dr shale 1600 ft. Keystone Pet. Corp.'s No. 1, 18-28-22, Rio Grande Oil Co. may continue well, td 3680 ft. K. C. Wallace's No. 1, 32-29-21, dr shale 2700 ft.

BUTTONWILLOW—General Pet.'s Morris 1, 6-28-23, 20-inch cas cmt 517 ft. Milham Exploration's Kern 6, 8-28-23, co 4945 ft; Kern 7, 5-28-23, rigged up; Kern 8, 5-28-23, rigged up; Kern 9, 5-28-23, rigged up; Kern 10, 5-28-23, rigged up.

EDISON — F. M. Sayre's No. 1, 5-30-29, swabbing, td 4125 ft. Shell's No .1, 33-29-29, dr shale and sand 3310 ft.

GOULD HILLS—Casa Mira Oil Co.'s Theta 1, 20-28-20, dr brown shale 3130 ft.

JASMINE—Helen Pet. Corp.'s No. 1, 33-25-27, co 1550 ft.

McKITTRICK—Ozena Oil Co.'s Kendon 2, 27-29-21, 6¼-inch cas cmt 2685 ft. Ohio's M. M. 1, 32-20-22, dr shale 3990 ft. H. L. Whiston's Wisecarver 1, 30-30-22, pumping water and oil, td 5040 ft.

MIDWAY — Shell's Peris 1-A, 15-32-23, plugged to 6300 ft, swabbed water. Standard's Mascot 1, 26-32-23, dr shale 9435 ft. Union's Reeves 1, 27-32-23, rigged up.

ROUND MOUNTAIN — Gerrard and Phillips' No. 1, 32-27-29, dr hard sand 1650 ft.

SAN EMIDIO—H. A. Bardeen's Klipstein 1, 18-10-23, dr shale 480 ft; Ramsey 1, 10-10-23, dr shale 115 ft.

SHALE HILLS—William Gilbert's No. 1, 35-26-18, will deepen from 750 ft. Girard Oil Co.'s Watkins 1, 28-26-18, dr shale 505 ft.

TEMBLOR HILLS—Shell's Gonyer 1, 32-32-23, dr shale 2840 ft.

WEED PATCH—Shell's Porter Day 1, 29-30-29, dr gray sand 1928 ft.

WILLOW SPRINGS—Moran and DeCamp's Marsh 1, 26-10-14, dr shale 215 ft.

SANTA BARBARA COUNTY

ARROYA PARIDA—Shell's Fithian 1, 18-4-25, sr 2330 ft.

BUELL CANYON — Union's Buell 1, dr 3978 ft.

CARPENTERIA — Continental's Bailard 1, dr shale 2570 ft.

CASITAS—Standard's Shepard 1, 26-4-25, dr shale 1450 ft.

GATO RIDGE—Barnsdall's Teg. 1, grading for rig.

GOLETA — Walter Barnhardt's Pomatto 1,

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1-4-29, co 2140 ft, will deepen from 2155 ft. General Pet.'s Crandall 138-1, dr shale 2828 ft; More 1, shut in; More 2, flowing 60 mil cu ft gas, td 4327 ft. Standard's Edwards 2, dr gray sand 3255 ft.

LOMPOC—Ohio's Hollister 1, 2-6-34, dr shale 3078 ft. Prairie Oil & Gas' Shyvers 1, 15-7-35, dr hard sand 1175 ft.

LOS OLIVAS—L. B. Tannehill's McGilvray 1, 23-7-21, changing to rotary tools, td 4388 ft.

ORELLA—General Pet.'s Erburu 2, testing water shutoff, td 1273 ft. Shell's Cov. 2, dr shale 233 ft; Rutherford 3, 1-4-31, dr gray sand 1800 ft.

POINT CONCEPCION—Standard's Gerber 1, dr gray sand 4350 ft. Universal Cons. Oil Co.'s No. 1, 30-5-34, rig.

SANTA MARIA — O. C. Fields Gasoline Corp.'s Norswing 1, 8-9-33, rigging up. Shell's Careaga 1, swabbing water, td 5713 ft.

VENTURA COUNTY

CAMARILLO—Calleguas Oil Synd.'s Leonard 1, 6-1-20, rigging rotary.

CONEJO—American Oil Co.'s No. 1, 33-2-20, co 1400 ft. Triunfo Oil Co.'s No. 1, 24-1-19, testing 6¼-inch shutoff, td 1605 ft.

FILLMORE—General Pet.'s Burson 1, 6-3-19, grading for rig.

OJAI — California Ventura Oil Co.'s La Crosse 1, surveying hole, td 5525 ft. Continental's No. 3, 21-4-22, will abn, td 6570 ft.

OXNARD — Shell's Pfeiler 1, plugged to 580 ft.

PIRU—Bolsa Chica Oil Corp.'s Snow 1-A, 4-4-18, dr shale 2015 ft. E. A. Fennell's Lankershim 1, 13-4-19, dr hard sand 1430 ft.

RINCON—Associated's Snowball 1, 19-4-24, dr hard sand 1478 ft.

CALABASAS—Olympic Corp.'s No. 1, 18-1-17, dr hard sand 2255 ft.

SANTA PAULA—W. W. Bryant's Anlauf 3, will deepen from 1150 ft. Empire Oil Co.'s Steen 4, 13-4-21, dr shale 3120 ft. Universal Exploration Co.'s Anlauf 2, 21-4-21, lcn.

SATICOY—Standard's Citrus 5, 10-2-22, sdtr drill pipe, td 8529 ft.

VENTURA—Prairie Oil & Gas' Sexton 1, 30-3-22, rigging up.

MISCELLANEOUS

FRESNO COUNTY—Rio Grande's No. 1, 35-13-16, lcn. Fresno-Madera Synd.'s No. 1, 18-12-21, rigging to deepen, td 4300 ft. Western Gulf's Welsh 1, 26-15-12, dr shale 3950 ft.

KINGS COUNTY—Wellport Oil Co.'s No. 1, 9-24-17, dr shale 3250 ft. J. E. O'Donnell's No. 1, 7-23-20, dr shale 2500 ft.

MADERA COUNTY — George F. Getty's Chow Chilla 1, 8-10-14, coring hard sand 2960 ft.

MENDOCINO COUNTY—Twin State Oil Co.'s Soldani 1, 14-12-17, dr in oil sand, may make commercial well, td 2550 ft.

MONTEREY COUNTY—Standard's Piedmont 1, 23-22-7, dr shale 3768 ft. Union's Paige 1, 8-22-8, dr shale 3100 ft.

SAN LUIS OBISPO COUNTY — Midwest Oil Co.'s Hately 1, 34-31-15, co 3830 ft. Pismo Dome Oil Co.'s Pricco 2-A, 5-31-13, dr shale 1955 ft; C-1, 5-31-13, fsh for tools 1105 ft. San Luis Synd.'s No. 1, 29-31-13, co 3640 ft. Texas Pacific Coal and Oil's No. 1, 25-32-14, fsh 4000 ft.

TULARE COUNTY—Terra Bella Oil Co.'s Gardiner 1, 35-22-27, 8¼-inch cas re-cmt 830 ft, td 863 ft.

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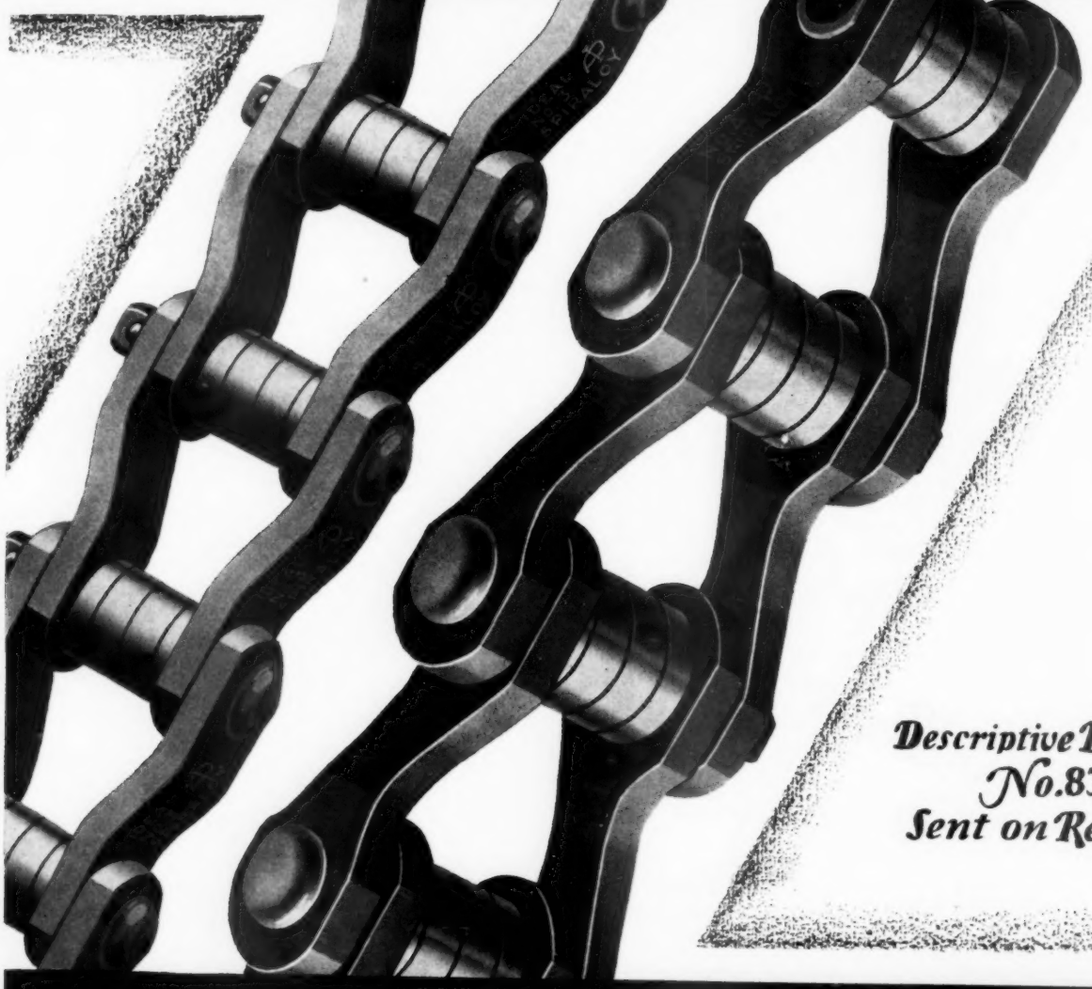

Descriptive Bulletin
No. 83
Sent on Request

THE
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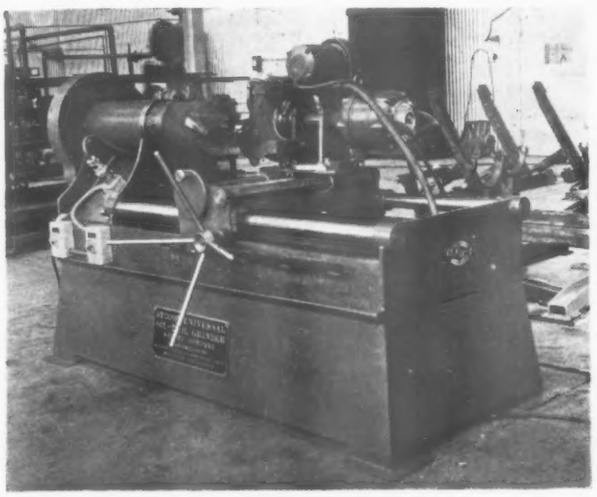
NEW EQUIPMENT, CATALOGS, BULLETINS, BOOKS



Stoody Bit Grinder

Bit Grinder

STOODY COMPANY

Stoody Company, Whittier, California, has placed on the market a universal bit grinder, which occupies a floor space of around 3½ by eight feet consisting of a base on which are mounted the necessary machinery and equipment for internal and external grinding as well as for rotating the bit as it is ground and for furnishing water for the granding operation. The entire assembly weighs approximately 2500 pounds, fully equipped.

The grinder has a capacity for bits up to 17½ inches in diameter and with a direct reading gauge for both extennal and internal diameters.

Bits may be ground as they rotate or the bit may be ground when not in rotation. A specially designed guide directs the path of the external grinding wheel so that it will follow spirals as well as straight cutting edges and any desired clearance from the cutting edge may be ground easily and accurately. At all times, the bit is ground concentric with the axis of rotation when in service.

Furnished with a thread to take an A. P. I. or standard six-inch drilling bit pin, the spindle, by the use of suitable subs, may be adapted to fit any size or type of bit.

The machine has a hand operated longitudinal feed and a hand operated cross feed which operate on rigid ground ways.

As marketed, the spindle revolves at a speed of 50 revolutions per minute, but the driving arrangement is equipped for a change of gears and may be slowed or speeded to meet any individual requirements. The grinding units consist of a regular Stoody combination grinder, powered with a two-horsepower motor capable of driving a 14-inch by two-inch grinding wheel at a speed of 1800 revolutions per minute at 60 cycles and 1500 revolutions per minute at 50 cycles, and a specially built internal grinder, powered with a ¾ horsepower motor with an overload capacity of two horsepower and capable of driving a 2½-inch by 3½-inch grinding wheel at a speed of 6000 revolutions per minute at 60 cycles.

In order to meet any and all local conditions this grinder is equipped and marketed to be used either with 50 or 60 cycle alternating electric current of 220 or 440 volts and also with direct electric current and is furnished either fully equipped with both external and internal grinders or less the external grinder where ever it is desirable to utilize the Stoody combination grinder already on hand.

Paul Edkin, who has previously been Oklahoma-Kansas salesman for Babcock & Wilcox Tube Company, has joined the Republic Supply Company as salesman in the same territory, working out of Tulsa.

Thermic Syphon Boiler

OIL WELL SUPPLY CO.

Oil Well Supply Company, Pittsburgh, has recently announced the California, latest thermic syphon equipped boiler. As the name implies, it was designed especially for California oil fields, and, in addition to complying with A. P. I. specifications it meets the demands of the department of industrial relations, industrial accident commissions of California. Weight is within the California road limits. It is built in accordance with the A. S. M. E. code, and to comply with the regulations of the National Boiler Board.

The Californian is an open bottom type boiler. A leading feature is the adoption of the Nicholson thermic syphon, the action of which induces water circulation quickly and positively.

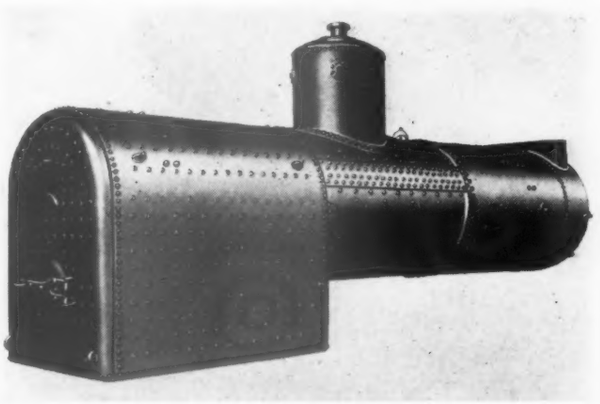
Increased circulation is for a more even temperature, and steaming capacity is increased because the syphon adds to the firebox heating surface. The thermic syphon offers a safety feature in case of low water. Its spouting action, due to rapid evaporation within the syphon itself, offers protection for the crown sheet to prevent damage to property and life. The crown sheet is flooded with water through the functioning of the syphon.

Seamless steel boiler tubes are beaded and prossered in the firebox tube sheet. These tubes are spread with large bridges and arranged in vertical and horizontal rows to induce a self-cleaning effect. All fitting connections are forged steel rivited to the plates, and provision is made for ample blow-off requirements.

The mud ring is made from a three by four-inch steel bar, the ends of which are butt welded after it has been shaped. The bar is then annealed. All rivet holes in the plates and nut ring are drilled from the solid after assembly to prevent rivets from shearing.

The Californian is designed to operate at 200 pounds working pressure.

Further details will be furnished by Oil Well Supply Company upon request to the above office.



Oil Well Boiler

Combination Tong

HILL & FOSTER COMPANY

Hill & Foster Company Tong

Hill & Foster Company, Wichita Falls, Texas, is distributing a new combination pipe and tool joint tong, which catches and holds any size pipe from 6½-inch O.D. to nine-inch O.D. without the use of bushings, or which catches and holds any size pipe from 4½-inch O.D. to 6½-inch O.D. by the addition of one flexible bushing.

It has an optional automatic latch, which is usable without a latch where only a single pull is required and the maximum speed is desirable, is usable with an automatic latch by a quarter turn of the hand wheel. This is done before the tong is ready to go on. A similar turn makes the tong ready to come off as though the tong had not been used.

When latched the tong may be pulled back by the end of the handle with an average loss of about four inches at the end of the handle in each successive stroke.

It has a Timken roller bearing in the handle to minimize the effort in operation.

Basco Winch

B. & A. SPECIALTY COMPANY

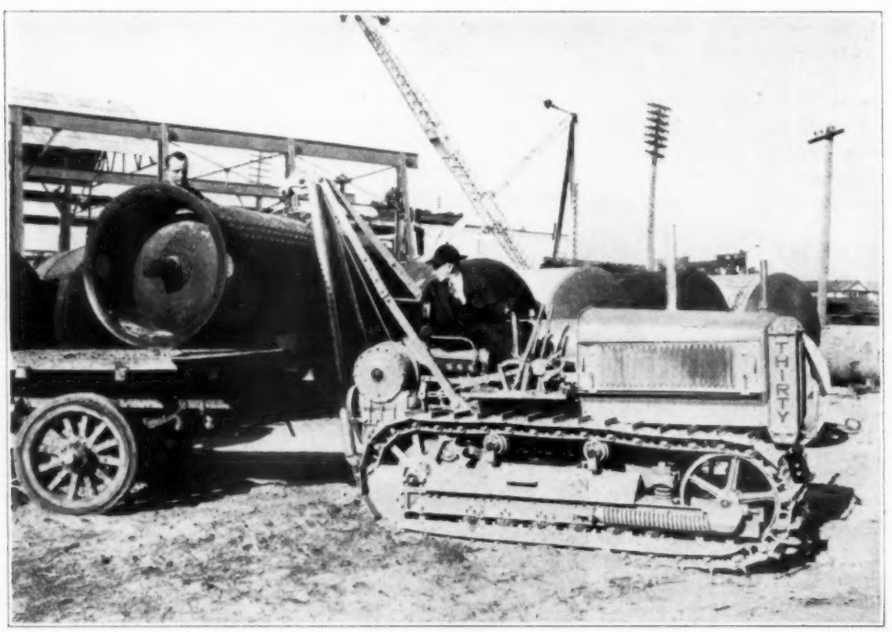
The Basco winch for the "30" Caterpillar derives its power from the tractor power take-off shaft through a splined shaft of alloy steel to the power take-off or transmission. It has two speeds, over sized cut gears mounted on alloy shafts and running on heavy duty annular ball bearings. Both the gears and shafts are heat treated.

Placing the outfit in neutral eliminates all winch moving parts.

The intermediate drive has a splined shaft from the power take-off to the outboard bearing, heavy duty annular ball, through the sprocket to 1¼x⅝-inch heavy duty roller chain, to sprocket splined to worm shaft.

The drum is one-piece electric steel, thoroughly annealed, size 14x7½x21 inches. Capacity is 500 feet of ⅝-inch wire line.

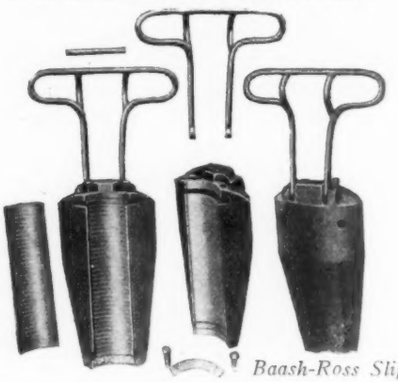
The boom is all steel with a sheave height of eight feet from the ground level. The winch line is designed and constructed to pull 25,000 pounds at 35 feet per minute (standard size) or is optional in size down to 12,500 pounds at 70 feet per minute. The boom is adjustable to give a radius from the center of the rear axle shaft of four to six feet. Boom capacity is two tons for loading or stationary loads or one ton may be transported.



Basco Winch

New Rotary Slip

BAASH-ROSS TOOL COMPANY



Baash-Ross Slips

Baash-Ross Tool Company of Los Angeles has recently brought out a newly designed rotary slip with liners 18 inches long, to provide ample gripping area to take care of the heavier springs without excessive pressure against the pipe. This improved slip is provided with liners which can easily be removed and sharpened when dull, or economically replaced by new ones when worn out.

The popular features of the previous design have been retained, as shown in the accompanying illustration. Two set screws hold the liner retaining plate rigidly in place during use, but require only a few turns to release and permit sharp liners to be inserted. The recess in the slip body into which the liners fit is dovetailed so that the liner could not fall out.

Bulletin No. 36A, giving complete details on this new rotary slip, will be mailed upon request to the Baash-Ross Tool Company, Box 1297, Arcade Station, Los Angeles.

Mills Iron Works, Inc., Los Angeles, has made its first shipment by boat to stock its Houston warehouse, located at 2301 Commerce Street. This shipment was 5700 seamless solid nose bull plugs in both standard and extra heavy weights, ranging in size from two to eight-inch. Additional shipments of bull plugs and other products of this company will be made to the Houston branch shortly.

Mills Iron Works, Inc., has appointed Paul Reid as Texas representative after applying for a foreign corporation state license in Texas. Reid maintains an office at 1017 Second National Bank Building, Houston.

About Manufacturers
And Their Agents

FRANK DELUCE

Frank W. DeLuce of Tulsa who has been promoted to be division manager of A. M. Byers Company with offices in Tulsa. Mr. DeLuce has been sales representative of A. M. Byers Company in Kansas and Oklahoma. His division will embrace the territory of Kansas and Oklahoma as heretofore. Mr. DeLuce has been engaged in the supply business for 11 years.

Ward Chemical Corporation Tulsa, has established a branch office and warehouse in Oklahoma City to serve that area in chemicals for use in the producing and refining industries as well as natural gasoline plant operation.

C. R. (Charlie) Goodrich has been made sales representative in Texas for the Ward Chemical Corporation and will have headquarters at the Texan Hotel, Wichita Falls. He will cover the North and West Texas areas. Ward Chemical Corporation also maintain a branch office and warehouse in Wichita Falls.

Petroleum Rectifying Company of California, 530 West Sixth Street, Los Angeles, announces a new bulletin, which is just off the press and ready for distribution. This is "The Petreco Process for the Electrical Dehydration of Crude Oil Emulsions." It is an interesting, comprehensive and instructive publication on the subject of treating cut oil. It treats of the problem also of preventing tank bottoms, recovering oil from emulsions and restoring production to its original gravity. A copy of this publication is available by writing the above address.

John S. Walker, Jr., manager of the Huntington branch office of Sullivan Machinery Company since its establishment in 1912 and a member of the organization since 1901, has retired to engage in the banking business in Huntington. Morley S. Sloman, who has been associated with the Pittsburgh office of the company for 14 years, has been appointed as successor to Mr. Walker.

Byron Jackson Company has established a branch, effective April 1, in Oklahoma City, Smiser Building, Shields and G streets, to serve the Oklahoma City field and surrounding territory. This new location is now the headquarters of Bud Vincent, Bob Cook, Troy McMillan, Monk Cook, Van Nelson and Al Ausmus. Representative stocks are being maintained under the supervision of D. O. Pugh.

Marshall Moore, representing Byron Jackson Company, has left his headquarters in Kansas to cover various Eastern fields located in Ohio, West Virginia, Pennsylvania, Michigan and Indiana on a six-weeks sales trip.

The Thrift Corporation, Houston, has moved its office from 1011-13 Marine Bank Building to Sections 953-954 Merchants & Manufacturers Building, where executive offices and warehouse will be maintained.

E. E. Pryor of the Specialty Oil Tool Company, Los Angeles, left the factory recently in a specially constructed tool car with a complete string of "Sotco" fishing tools, and is now pioneering the Gulf Coast and Texas oil districts, where he is repeating a previous demonstration tour of Mid-Continent fields. Pryor goes right out into the fields with his equipment to fish and demonstrate the "Sotco" tools for the various companies which are interested.

This fishing tour is putting "Sotco" fishing tools in actual contact with the problems for which they have been designed and manufactured.

In addition to the equipment carried in the truck, two complete strings of all "Sotco" tools have been shipped to the Lucey Corporation at Houston, "Sotco" distributors, for stock. The five principal tools in the "Sotco" line are: the hydraulic knuckle joint (dog-leg); the adjustable grab, which is a non-dimensional tool with four steel arms, operated by means of a heavy spring supported by a set of tapered wedges, and so constructed that it can be opened or shut at will by the operator at any point in the hole; the hydraulic wall hook; the spiral guide; and the combination trip packoff overshot (socket).

Electrical Equipment for Rotary Drilling, an eight-page leaflet recently published by the Westinghouse Electric and Manufacturing Company, describes the application, design, and operation of motors and control used for rotary drilling.

The leaflet is illustrated with actual installation photographs showing construction details.

An interesting feature of this publication is a curve showing how all power requirements of rotary drilling are easily met by electric drive.

Copies of the publication can be obtained from the Westinghouse company by requesting leaflet 20444.

Oil Field Salvage Company has recently been organized for the purpose of salvaging good used tubular material. Work will be started initially in the Gulf Coast Territory, and headquarters of the new company has been established at 1816 Nance Street, Houston. The company is equipped to shoot and pull wells of any depth. The executive personnel includes S. E. Manning, president; O. B. Beckman, vice president, and George O'Leary, secretary-treasurer.

A. B. Schnitter of Byron Jackson Company has established headquarters and sales office at Apartado 324, Maracaibo, Venezuela, from which point he will cover various South American fields.

Louis Roark announces the opening of an office as consulting geologist and operator of the oil flow indicator at 435 Philcade Building, Tulsa. The oil flow indicator is manufactured by L. E. Trout & Company, Wichita Falls, Texas.

Athey
TRUSS WHEEL

OIL FIELD WAGONS

ATHEYS are all steel general utility wagons for use behind tractors, either singly or in train. Carry maximum 10-ton loads under all operating conditions. They are the modern, economical means for hauling heavy loads. Made in 10, 15 and 20-ton capacities. . . . Write for complete information.

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Vol. II, 780 pp., 235 illus., postpaid, $6.00

AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS
Box 1852, Tulsa, Oklahoma, U. S. A.

Squeaks from the Bull Wheel

The colored porter of a Stock Exchange house was telling his employer that he was going to a chicken dinner.

Employer—How much is the dinner going to cost?

Porter—Fifty cents.

Employer—Why so cheap?

Porter—The chickens are donated.

Employer—By whom?

Porter—I don't know, sir.

Jim—I understand you accused me of being dishonest.

Phil—I never said anything of the sort. What I did say was that if you hadn't helped me look for that dollar I lost the other day, I might have found it.

"Say, Mom, was baby sent from Heaven?"

"Yes, son."

"I guess they like to have things quiet up there, huh, Mom?"

"Any one could tell by looking at you that your parents came from Ireland."

"My parents did not come from Ireland," said Pat.

"Come on, don't try to fool me, your face shows your parents came from Ireland."

"They did not," said Pat, "they are in Ireland yet."

The new treasurer wrote a letter, and 50 per cent of those in arrears to the church paid up; he wrote another letter and all but one paid. Finally he wrote one more and the last man sent in his check. Shortly afterward the pastor was invited to dinner at the man's home.

"You have a new treasurer at the church now haven't you?" inquired the host.

"Yes," answered the pastor undecided as to how his parishioners felt toward him.

"He writes a nice letter," remarked the host, "except that he can't spell."

"Is that so?" said the minister.

"Yes, he ought to be corrected on that," said the host seriously. "He spelled 'skunk' with a 'c,' and had two 's's' in 'lousy.'"

Agent (to newly rich client, engaging talent for her "at home")—What about Madame D'Oprano?

Client—Is she good?

Agent—Good? Why, she's a great virtuoso.

Client—Never mind about her morals. Can she sing?

Scotch Gent: My lad are you to be my caddie?

Caddie: Yes sir.

"And how are you at finding lost balls?"

"Very good, sir."

"Well, look around and find one and we'll start the game."

"Mike, how did the accident happen

Mike—Well, boss, ye see 'twas like this I was drivin' me truck up Main Street when I had to stop suddenly, and a fellow in a big Packard car crashed in the rear of me truck. Sure, it didn't hurt his machine very much, but he jumped out ran up to me, and a-shakin' his fist, said "Hey, you little Harp, why didn't you put out your hand?" "Put out me hand," said I. "Ye dang fool, if ye couldn't see the truck, how the devil could ye see me hand?"

The toast "Long live our teachers" had just been drunk. A new teacher was called on to make the response. Blushingly he got to his feet and said:

"What on?"

Did you say she has poise?

Yes; Avoirdupois.

Old Lady—If you really want work Farmer Gray wants a right-hand man.

Wanderer—Jus my luck, lidy, I'm left-'anded.

The junior partner was interviewing a pretty girl who had applied for a position. The senior partner came in, and, after inspecting the vision, called the other member of the firm aside and whispered: "I'd hire her."

"I have."

"Can she take dictation?"

"We'll find that out later," said the junior partner, "I didn't want any obstacles to crop up."

It was the morning after the night before. "How did you find yourself this morning?" asked one wan participator of another.

"Oh, easily," was the reply. "I just looked under the table and there I was."

"Raise Schmitt $10.00 a week."

"What for?"

"Se he'll feel worse when I fire him."

"Women are fools to marry."

"Yes, but what else is there for men to marry?"

The co-ed has become very apt at telling the time by the length of her date's whiskers.

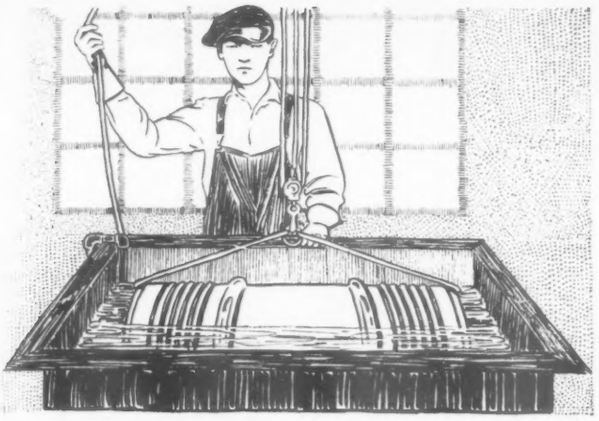
I hear your store was robbed last night. Lose much?

Some. But it would have been worse if the yeggs had got in the night before. You see, yesterday I just finished marking down everything 20 per cent.

"I didn't know he was from Los Angeles till I saw him in the showers."

"How was that?"

"He had a dent in his stomach from carrying cafeteria trays."



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THE job of cleaning oil drums before refilling can be done easily and at small cost if Oakite materials are used.

Cleaning the Oakite way loosens grease, dirt and caked-on sediment from both outside and inside so that they rinse away completely. Nothing remains that might affect the grade of the new oil. Safe, too. Water solution eliminates fire danger.

Our booklet "Oakite in the Oil Industry" gives facts and formulas for this and many other oil-industry cleaning jobs: such as cleaning parts before salvage, cleaning storage tanks, and stripping paint from drums and tanks before repainting. Let us send you a copy.

Oakite Service Men, cleaning specialists, are located in the principal industrial centers of the U. S. and Canada

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Lukens Steel Company, New Orleans, La.

ARMCO IRON LINE PIPE and OIL WELL TUBING

OIL

Its Conservation and Waste

By
JAMES H. WESTCOTT

This is a new book on petroleum written especially for the layman. The style of the book is such that it will appeal to the man not familiar with petroleum or the methods of recovering it. It gives a birds-eye view of the industry in its three phases.

Much data in the form of figures supplements the subject matter. These figures cover production, refining, etc., and constitute a good source for general information. There are 62 tables covering a wide range of topics related to the industry.

213 pages—$3.00 Postpaid.

The GULF PUBLISHING COMPANY
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Shaffer Specialty Company
Shaffer Tool Works
Sheldon Machinery Company
Sinclair Refining Company
S-K-F Industries 9
A. O. Smith Corporation
E. M. Smith Manufacturing Company
H. C. Smith Manufacturing Company 40
Howard Smith Company
South Chester Tube Company 77
Southern Engine & Pump Company 100
Spang, Chalfant & Company
Specialty Oil Tool Company
Springfield Wagon Company
Eugene C. Stacy
Standard Supply & Hardware Co.
Star Drilling Machine Company 81
George Steiner
Jesse R. Stone 106
Stoody Company
Sullivan Machine Company

Taubman Supply Corporation
William Taylor Hotel
Technical Products Company
Templeton, Kenley & Company
Texas Creosoting Company
Texas Cyclone Fence Company
Texas Iron Works
Texas Power & Light Company
The Thrift Corporation
Timken Roller Bearing Company 39
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Triad Products Company
Trimont Manufacturing Company 71
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Union Carbide & Carbon Corporation
Union Chain & Manufacturing Co.
Union Wire Rope Corporation
United Tractor Equipment Corp.
Universal Engineering Company

Vez Company 65
Victaulic Company of America
Victor Balata & Textile Belting Co.

Wagner Electric Corporation 14
Waukesha Motor Company
C. W. Webster 106
Westcott Valve Company
Westinghouse Electric & Manufacturing Company 54
West Texas Utilities Company
Calvin Wheat Studios 106
Wickwire-Spencer Steel Company
Wico Electric Company
Wiemann-Kemmerer-Wright, Inc.
Williamsport Wire Rope Company
J. H. Williams & Co. ..... Second Cover
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Wilson-Snyder Manufacturing Company
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Yale & Towne Manufacturing Co.
Young Engine Corporation

Zero Hour Torpedo Company

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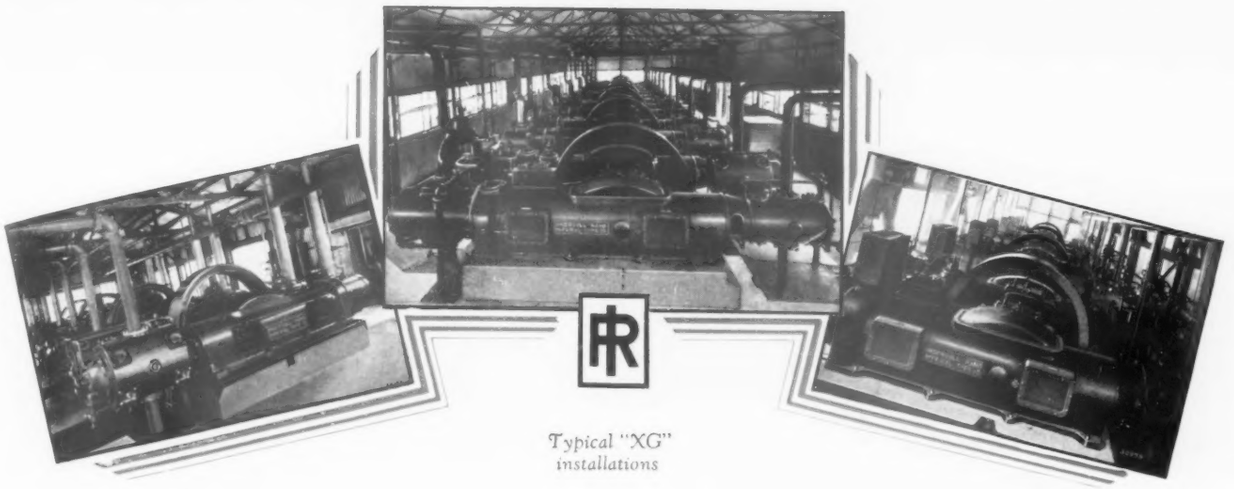

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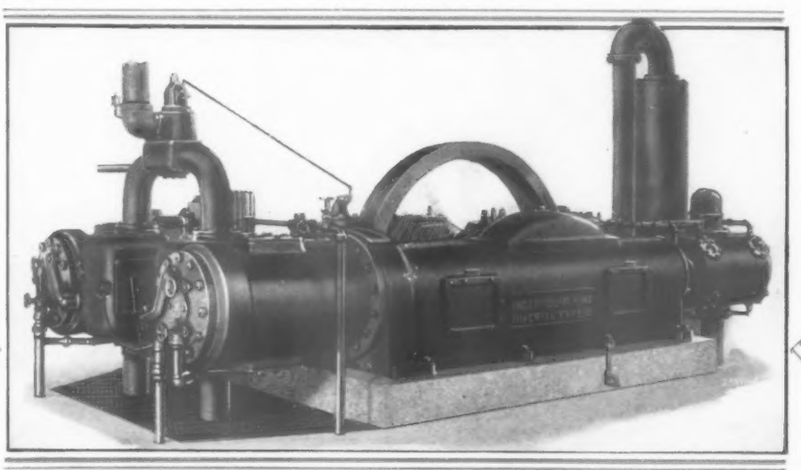

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